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WORK IN TRANSITION: STANDARD AND SUSTAINABILITY IN THE ITALIAN ORGANIC FOOD VALUE CHAIN

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Abstract

This thesis is the result of three years of PhD training and several months of ethnographic fieldwork and qualitative research conducted in the rural areas of the province of Ragusa (Sicily) and within the logistical wholesale markets of Bologna (CAAB) and Padua (MAAP), analyzes the agri-food supply chain, focusing particularly on the organic industrial sector. The research aims to capture the evolution of relationships among various segments and actors in the agri-food value chain while examining labour conditions in the context of Italy's green restructuring.

Employing a supply chain approach, the research examines transformations at both meso and micro levels, revealing the significant effects of restructuring within the context of the Corporate Environmental Food Regime (Friedmann, 2005), especially concerning migrant labor. Adopting the labour regime framework developed by Baglioni et al. (2023), the research illustrates the interplay between production, circulation, social reproduction, and ecology, and highlights the influence of power asymmetries within the supply chain.

Key findings indicate the convergence of sustainability initiatives with the "conventionalization" of organic farming (Buck et al., 1994), dominated by large agribusinesses leveraging private certifications which in turn result in strengthening existing power imbalances. The study identifies key elements of this restructuring including the consolidation of power asymmetries among large distributors, the marginalization of smaller producers, and the increasing role of large logistic centers under the direct control of large retailers at the expenses of wholesale fruit and vegetable markets. The ethnographic approach adopted reveals how these transformations also affect the micro level, particularly concerning labour conditions and labour processes. Moreover, it emerged how social differentiations, particularly related to gender and race, influence labor dynamics and the reproduction of the workforce, thereby revealing power asymmetries that characterize labour at different levels of the supply chain. It also identifies the central role of intermediaries and the impact of green transition policies, which, while aiming for sustainability, often overlook the economic inequalities faced by laborers, particularly migrant workers.

Finally, the study documents the diverse forms of resistance enacted by these workers, highlighting their negotiation strategies to access public services amidst systemic marginalization. The findings underscore the pressing need for a more comprehensive understanding of how workers' resistance intersects with the dynamics of the green transition, facilitating a broader dialogue on sustainable practices in the agri-food sector.

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Introduction

This thesis is the result of three years of PhD training and several months of ethnographic fieldwork and qualitative research conducted in the rural areas of the province of Ragusa (Sicily) and within the logistical wholesale markets of Bologna (CAAB) and Padua (MAAP). From the outset, this work aims to analyze the structure of the agri-food supply chain, with a particular focus on the organic industrial agri-food supply chain. The objective is to capture the evolution of relationships among various segments and actors of the value chain, as well as to examine labour conditions within the context of the *green* restructuring of the Italian agri-food supply chain.

Context and background

In recent years, the increasing focus on environmental sustainability within agri-food systems has gained considerable prominence within and outside the academic debate. The urgency to address the climate and ecological crisis with effective solutions and ensuring sustainable food system approaches has been amplified by the Covid-19 pandemic in 2020. The launch of the European Green Deal and the Farm to Fork Strategy, alongside the Next Generation EU plan, represents unprecedent efforts to establish a framework for the green transition that address social and economic challenges. Within this context, several contributions (Pellizzoni et al., 2024; Omar, Thorsøe, 2023; Levidow, 2015) have critically examined the impact and effectives of EU policies and strategies aimed at promoting a green transition towards sustainable production systems. These studies emphasize the need for more ambitious and holistic approaches to disseminate new cost-effective and eco-friendly farming solutions. However, as the initial chapters of this work will demonstrate, the proliferation of strategies and policies for the green transition has encountered numerous challenges and contradictions, particularly exacerbated by significant international events such as the Covid-19 pandemic and the breakout of the war in Ukraine. For instance, by early 2024 European producers and farmers launched several protests against the rising costs associated with the green policies enacted in the Common Agricultural Policy (CAP) for 2023-2027.

Aim and research question

The rationale of this research stems from the pressing need to address and identify the social impacts of these transformations and of the attempts to promote a sustainable and green

reorganization of agri-food supply chains, a topic that remains largely unexplored within the academic literature. Policies and strategies for the green transition have primarily been portrayed as opportunities for job creation and initiatives for the *reskilling* and *upskilling* of workers (Vandeplas et al., 2022; ILO, 2015). However, there has been insufficient empirical investigation into the impact of these programs on labor conditions and the emergence of new job opportunities. As Guillibert et al. (2022) have observed, the increasing academic interest in employment opportunities associated with the green transition, has not adequately addressed the quality of such jobs and their working conditions, primarily focusing on quantitative aspects.

This research aims to bridge this gap by exploring, from both a meso and micro perspective, how these transformations are unfolding within the agri-food sector, particularly considering organic agriculture and sustainable practices. This work explores the interrelationships among various segments of the supply chain, including agricultural production, packaging and logistics. It also examines labor conditions across these distinct segments. In this regard, the research seeks to analyze the transformations of Italian agri-food value chains and how they have been fostered by the expansion of the organic market. In addition, this analysis will consider how the meso-level structure of the overall Italian industrial agri-food supply chain interacts with and influences labour processes within it, and the relationships established among the different actors of the supply chain. The objective is therefore to analyze and unpack the elements of continuity and discontinuity between the organic industrial farming and conventional agriculture.

The choice of the fieldwork and the rationale of the research

Research focusing on the study and analysis of labour processes transformations through an approach centered on global value chains (Gereffi, 1994) has frequently underscored the significance of the fragmentation of production across spatial and temporal domains along supply chains and global production networks. This phenomenon has led to a marked convergence between the circulation of goods and their production which has also been visible within the agri-food supply chain leading to critical transformations that will be explored along this thesis. This progressive convergence, together with the decision to approach the topic and the analysis of the organic agri-food value chain from both a meso and a micro level and to explore the relationships existing between the various actors, has required to focus the research on different segments of the value chain. On this regard, the study engages in the analysis of two main segments of the supply

chain: that of production and that of logistics/distribution, while also encompassing the processing and packaging stage. Therefore, three months of ethnographic and qualitative research were conducted in the rural areas of the province of Ragusa (Sicily) and within the logistical wholesale markets of Bologna (Centro AgroAlimentare di Bologna, CAAB) and Padua (Mercato AgroAlimentare di Padova, MAAP).

The decision to focus the research on these two contexts was guided by three main criteria. The first one relates to the relevance of the reference contexts. The province of Ragusa, and more specifically the area of the Transformed Littoral Strip, is recognized as one of the most significant fruit and vegetable production district in Southern Italy, particularly with regard to greenhouse production. In the second case, the fruit and vegetable markets of Padua and Bologna were selected as research sites due to their relevance in the logistical and distribution framework of Northern Italy, and also for their importance in terms of relations with foreign markets, particularly in the case of the Padua market.

The second aspect concerns the deep interconnections between the selected contexts and the broader framework for the green transition. As will be discussed in the following chapters, particularly in Chapter 4 and 5, both areas have experienced significant transformations in response to the increased awareness concerning the urgency to promote more sustainable and green production systems. In the rural area of Ragusa, for instance, the relevance of organic and sustainable agriculture has increased significantly over the last few decades, with several farmers and producers converting their production to more sustainable practices. Furthermore, the markets of Bologna (CAAB) and Padua (MAAP) are currently engaged in initiatives to promote substantial restructuring within the context of the green transition, especially under the Italian fundings of the National Recovery and Resilience Plan (PNRR).

The third element that has influenced the choice of both the contexts for the fieldwork and the segments of the supply chain on which to focus the research pertains to the composition of the workforce employed in the production and logistic phase. On this regard, several scholars have underscored the pivotal role of migrant labour in these two levels of the supply chain. These contributions have primarily analyzed working conditions in the fields and greenhouses of key agri-food production districts in Southern Europe or within the warehouses of large logistical hubs. The increased interest in the analysis and study of “invisible workers” employed along the agri-

food supply chain has also attracted an increasing attention of national media, which is often characterized by victimizing narratives.

In recent years, a numerous studies have focused on migrant labour, particularly emphasizing the centrality of migrant workers in agriculture. These investigations have primarily analyzed working conditions in the fields and greenhouses of key agri-food production districts in Southern Europe, showing even in contexts typically regarded as benchmarks of excellence, the most marginalized workers often bear the greatest burdens.

The issue of labour within the agri-food supply chain has attracted increased media attention in recent years, largerly due to the numerous academic research that have increasingly shifted towards ethnographic and field-based approaches. This growth in media presence has often been characterized by rhetorical and victimizing narratives. Therefore, this issue has captured the attention of public institutions at both the Italian and European levels, focusing on the working conditions in the agricultural sector. At times, these institutions have proposed legislative solutions aimed at providing greater protections for workers. For instance, at the Italian level, one example has been the introduction of the Law No. 199/2016, aimed at counteracting labour exploitation and illicit forms of intermediation, such as *caporalato*. Moreover, the European directive against Unfair Trading Practices (Directive EU 2019/2161) seeks to address the challenges posed by vertical integration throughout agri-food supply chains. Furthermore, the realm of green transition has been central to efforts not only to move toward more environmentally sustainable systems, but also to advance social sustainability. The European framework for green transition, as illustrated also by the Farm to Fork Strategy and the 2023-2027 CAP, also exemplifies this commitment. These initiatives encompass specific measures aimed at enhancing working conditions within production processes, including the introduction of social conditionality.

Nevertheless, the gradual alignment of social and environmental sustainability, primarily promoted by the EU, is frequently perceived as a nearly natural pairing, suggesting that an increase in one should automatically result in benefits for the other. This perception has fostered a widespread and somewhat distorted understanding that associates greater environmental sustainability of products with enhanced ethical and social value, also concerning labor protections. Whilst the focus of this analysis is not on consumer behavior, one of the objectives of this research is to investigate and reveal the fallacies underpinning these beliefs, emphasizing the need for a holistic approach that places labor—especially migrant labor, which is at the heart of

agricultural production—at the forefront of the discourse. Moreover, the EU framework for the green transition, especially with the Farm to Fork Strategy and the 2023-2027 CAP, also include some measures aimed at enhancing working conditions in agriculture, with an emphasis on social conditionality. Nevertheless, the prevailing perception that social and environmental sustainability are inherently linked often gives rise to the misconception that progress in one area will invariably benefit the other. This has resulted in a misleading conception that environmental sustainability is directly correlated with enhanced ethical and social values, including labor protections. Therefore, this research also aims to challenge these misconceptions and emphasize the significance of prioritizing labour, particularly migrant labour, in the analysis of the effects of the green transition within the agricultural sector.

Theoretical perspectives

This research has moved through multiple theoretical approaches encompassing both the analysis of the organizational structure of agri-food supply chain and the study of labor relations and processes within it. In addition to the literature directly pertaining to the research context, the primary theoretical frameworks that have influenced this work include supply chain studies, migration sociology, labour market segmentation and agriculture political economy. Specifically, this research engages with two significant theoretical strands: one exploring the effects of the transformations of global production on labour regimes, and the other one investigating the neoliberal restructuring of food regimes.

Considering the domain of labour regimes, the contributions of Baglioni et al. (2022) have been particularly influential in shaping the research. The authors provide a systemic theorization of the intersections between labour within workplaces and broader social institutions and processes that has provided a foundational framework for understanding labour regimes. This framework conceptualizes labour regime as "historically formed, multi-scalar phenomena resulting from the articulation of struggles over local social relations, and their direct or indirect interactions with the commercial demands of leading firms in global production networks and with the gendered and racialized politics of social reproduction" (Ibid: 3). Engagement with this body of literature has favored the definition of an analytical framework that allowed to integrate the various fields of inquiry examined within the research. This has enabled the exploration of the multiple dimensions and levels involved within agri-food system, therefore analyzing both production, circulation and

labour, and their connection with the reproductive and, crucially, the ecological context that underlines and unifies the research (see Chapter 3). This approach has been particularly relevant as the research focuses on the analysis of the organic supply chain and of the implications of green transition policies and strategies within the broader framework of agri-food supply chain restructuring.

Concerning the literature on food regimes, the research builds upon the seminal works of Harriet Friedmann (1982; 2005) and Philip McMichael (1994; 2013), who have analyzed changes in agro-food systems across both space and time since the late 1980s, identifying different food regimes coinciding with different periods of capital accumulation: colonial-diasporic regime; mercantile-industrial regime, corporate neoliberal regime and finally the corporate environmental regime. While the first two regimes materialized in succession, as they were influenced by specific periods of capital accumulation, the corporate neoliberal and the corporate environmental regime manifested contemporaneously, yet they can be considered as two different approaches and interpretations of the same food regime.

The latter, which according to Friedmann (2005) pertains to the contemporary food regime, represents the "convergence of environmental politics" and the increasing influence of corporate and neoliberal actors, which play a key role in the "retail-led reorganization of supply chains" (Ibid). The lens of the food regime theory has also been adopted by several scholars (Corrado et al. 2017) who have focused their analysis on the transformations of contemporary food systems, particularly concerning the increasing role of migrant labour within the context of Mediterranean agriculture. On this regard, this research also engages with the literature on migration, particularly focusing on the role of migrant mobility power (Alberti and Sacchetto, 2024) and on the various resistance strategies employed by migrant workers both within and outside the workplace in their efforts to improve their working and living conditions and challenge existing social structures.

The research also draws on various ethnographic studies that have investigated the forms and transformations of migrant labour, both at the agricultural production stage (Lo Cascio, 2022; Piro, 2020; Sanò, 2018) and in research that examined key characteristics of labour in logistics and processing facilities (Benvegnù and Iannuzzi, 2018; Piro and Sacchetto, 2020; Lo Cascio and Perrotta, 2022).

Reflections on the adopted methodology

The description of the methodological approach adopted in this research is extensively detailed in the final sections of Chapter 3. However, it is necessary to set out some preliminary remarks are necessary in this introductory section. In order to analyze the relevance of organic farming within agricultural production and its effects on supply chain dynamics and labour processes, an analysis of the effects of the EU's green transition policy framework would have been sufficient. However, the decision to explore the interconnections among the different spheres identified by Baglioni et al. (2022) (i.e. production, circulation, social reproduction and ecology) as constitutive of their conceptualization of labour regimes, required a more comprehensive analysis able to capture the interrelations between these spheres within the context of the Corporate Environmental Food Regime (Friedmann, 2005). Therefore, a qualitative and ethnographic approach seemed the most suitable for conducting such an analysis at both a meso and micro-levels, while also considering different segments of the agri-food supply chain. As explained in Chapter 3, adopting such an ethnographic and participatory approach, has indeed allowed a deep immersion in the context, favoring the emergence of critical aspects related to the growth of organic farming and sustainable practices, and an analysis of its potential social and relational outcomes over various supply chain actors.

Given the diverse contexts that were examined during the fieldwork, different strategies were adopted, which are described in detail in Chapter 3 (paragraph 9).

Concerning the production level, the decision to adopt an ethnographic approach necessitated an extensive period of fieldwork that was conducted from May to October 2023 in the Transformed Littoral Strip. This extended period of fieldwork enabled the exploration and adoption of diverse approaches for conducting the empirical research, thereby fostering a comprehensive and detailed analysis of the main dynamics characterizing the production context of the area. From this period of fieldwork significant findings emerged from the decision to undertake a period of participant observation volunteering during the activities carried out by local organizations and NGOs providing support to migrant workers. Moreover, a total of 48 in-depth and semi-structured interviews were conducted to local producers, stakeholders and representatives of institutions and local organizations. Thanks to the collaboration with EcorNaturaSì that was established from the outset of the research, a two-week period of participant observation working within the packaging warehouse of one of the area's primary organic companies was also possible. On this regard, section 3 (paragraph 8.1) also provides a detailed

reflection on the role and influence played by the collaboration with EcorNaturaSì, one of the most prominent Italian supermarket chains specialized on organic food production. Key elements influencing the research design included EcorNaturaSì's supply chain structure, particularly the presence of one of its major suppliers for fruit and vegetable products in the province of Ragusa – where the period of participant observation was conducted – and the 2020 opening of a logistic hub in the Bologna interport. Therefore, what began a collaboration and as a study on the case of EcorNaturaSì, expanded into a broader investigation, that allowed to situate the supermarket's development within the wider transformation of the organic market and examine the impact of the increased role of large retailers and distribution chains, with other supply chains actors such as wholesale agri-food markets.

The last context where the empirical research has been focused, is indeed that of the wholesale logistical agri-food markets of Bologna (CAAB) and Padua (MAAP), where the access to the field and workplace was mediated by internal actors due to the private nature of these sites. Consequently, all the visits and research periods – conducted between January 2023 and January 2024 – had to be coordinated in advance with quality control staff, administrative personnel and market operators.

In total the period of fieldwork has allowed the collection of 51 in-depth interviews with migrant and Italian farmworkers, porters, producers and farmers, business operators active within the wholesale markets of Padua and Bologna, trade unionists, and several other privileged witnesses.

Structure of the thesis

The thesis is divided into seven chapters. The first three chapters focus on presenting the theoretical framework that underpins the empirical analysis, whereas the subsequent chapters provide a comprehensive analysis of the empirical findings. The primary aim of Chapters 1, 2 and 3 is to construct and define the research object, as well as the theoretical background and the context in which the fieldwork was conducted, and the material analyzed.

Chapter 1 examines the major transformations that have characterized the agri-food sector in recent years, focusing on the impacts of the financialization of agriculture and on the concentration of cultivated land in the hands of large corporations, particularly on small farms. It also examines the role of migrant labor within a supply chain that is increasingly oriented toward

providing fresh, just-in-time products. The chapter also introduces the issue of vertical integration in agri-food chains to benefit large distribution companies, highlights the growing importance of intermediaries as a fundamental infrastructure within the supply chain, and discusses the progressive incorporation of environmental issues that have facilitated the entry of new private actors, such as organic certification bodies.

Chapter 2 provides a more detailed analysis of the evolution of organic agriculture. It describes the gradual integration of organic principles, which have their origins in a social movement advocating for an ecological and holistic approach to agriculture, opposed to the development of an increasingly industrial-oriented agricultural production. The chapter also examines the EU regulatory framework for the agri-food sector, highlighting the progressive integration of organic principles and values within the context of EU policies with a particular reference to the EU Common Agricultural Policy (CAP). Finally, it discusses the emerging criticisms and contradictions in this process of integration.

Chapter 3 aims to provide a more precise delineation of the theoretical framework of the research by defining the aspects that were investigated during the empirical analysis. The chapter draws from the conceptualization developed by Baglioni et al. (2022:81), which views labour regimes as an analytical category and a tool for analyzing labour processes and their intersection with various spheres—specifically Production (P), Circulation (C), Social Reproduction (S), and Ecology (E). The attempt of this section is to adapt this framework to the specific context of the analyzed agri-food supply chain. It defines the conditions under which workers are employed, the dominant processes within this specific context, and the primary dynamics and mechanisms at play.

The fourth chapter provides an overview of the context in which the research was conducted, detailing the evolution of the organic agri-food market in Italy and identifying key factors characterizing both the production district of the Transformed Littoral Strip and the wholesale fruit and vegetable markets of Bologna (CAAB) and Padua (MAAP).

The fifth chapter presents an analysis of the agri-food supply chain, with a particular focus on the intersection between the dimensions of Circulation (C) and Production (P) as defined in the third chapter, while emphasizing the ecological aspect of the green transition (Ecology, E). Specifically, the chapter aims to analyze, from a meso-level perspective, the primary dynamics and logics that govern the agri-food supply chain by examining the two reference contexts: the

greenhouse agriculture in the province of Ragusa and the wholesale fruit and vegetable markets. This chapter particularly highlights the centrality of intermediation as an infrastructural element of the supply chain, especially within the organic sector, and how this element has played a crucial role in the transformation and vertical integration of the supply chain, leading to an enhanced role for large-scale distribution, which has primarily manifested in the creation of independent logistical platforms and the gradual marginalization of the role of wholesale markets within the supply chain.

The sixth chapter closely examines the organization of labor within the analyzed contexts, specifically how Production (P) processes intersect with labor processes, defining dynamics of control, workforce division, and intermediation specific to the examined supply chain context. It focuses on the stratification of migrant labor within the Transformed Littoral Strip, exploring how this stratification is exploited to establish differentiated labor regimes. Additionally, it emphasizes the role of intermediation processes within the organization of productive relationships and describes the specific characteristics of labor within the organic supply chain, wherein the ecological dimension (E) is integrated.

The seventh chapter takes a broader look at the sphere of social reproduction, acknowledging the need to overcome the divide between production and social reproduction (S). It considers the context and dynamics in which the labor force is reproduced, highlighting specific social differentiations related to class, gender, race, and the working environment. This chapter analyzes how labor and participation in production processes (P) intersect with various reproductive activities, such as access to essential services like education, healthcare, and transportation, and how these differentiations and stratifications create spaces for both individual and collective resistance processes.

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Chapter 1. Working in sustainable agri-food supply chains: the rise of the green transition and the evolution of the EU agri-food sector

Introduction

In existing literature, few academic works have explored the importance of the green transition on employment and working conditions. As Guillibert et al. (2022) argue in their systematic literature review aimed at analyzing the effects of circular economy on labour in different sectors, most academic studies have focused on the social impact of the green transition, particularly considering the creation of new job opportunities. According to a projection conducted by the European Centre for the Development of Vocational Training (CEDEFOP), in 2021, a 1.2% increase in workplaces is expected by 2030 due to the European Green Deal implementation (CEDEFOP, 2021). However, the interest in the existing literature regarding the increase in employment opportunities linked to the green transition has not extended to the quality and the conditions of these jobs, rather focusing on quantitative aspects (Guillibert et al., 2022). A study conducted by CEDEFOP also revealed that, despite significant interest in analyzing the consequences of digitalization and automation of labour market, there has not been a corresponding interest in studying the consequences of the green transition on labour (CEDEFOP, 2021). To this extent, the concept of Just Transition has emerged as a vital discourse amid the European Union's (EU) green transition policies, particularly in the context of labor dynamics. At its core, Just Transition advocates for an equitable shift towards sustainable economies, ensuring that the most vulnerable groups, especially workers in high-emission sectors, are not left behind. By examining this interplay, it is possible to gain deeper insights into how existing economic paradigms affect both environmental sustainability and labour processes.

Emerging from labour movements in the 1970s, the concept of Just Transition emphasizes the need for equity in the transition to sustainable economic practices[1]. Therefore, the affirmation of

[1] The concept emerged in the United States in the 1970s in response to the increased regulation of polluting industries and in the demands of the Oil, Chemical and Atomic Workers' Union (OCAW) led by unionist Tony Mazzocchi. Tony Mazzocchi. Mazzocchi initially sought to reconcile social and environmental claims in the North American context against the environmental impacts of work and the widespread loss of jobs following the cleanup efforts of contaminated work sites (Morena et al., 2021). The term *Just Transition* was indeed first used by Tony Mazzocchi in 1993. Along with other activists, he established the Superfund for Workers, a program designed to define support

this framework was not the result of academical debates over environmental transition and industrial ecological conversion, but rather a grassroot response from workers, which imposed the condition for a struggle encompassing not only the urgency to make jobs safer, but also the priority of *knowing and acting,* particularly in the context of job blackmail (Leopold, 2007; Ibid). In the same period, awareness and linkages between environmental and social impacts of work were growing also outside the United States. In their 2021 contribution, Feltrin and Sacchetto, emphasized the role of the workerist group of Porto Marghera who organized important protests against environmental degradation caused by the industry, struggling against the inherent noxiousness of capitalist work and the need for an antagonistic-transformative approach to capitalist technology. Although the latter ones were not explicitly referring to Just Transition, they expanded the scope of their protests calling for a struggle to promote a transition towards a system that considers collective needs and sustainable relationships between humanity and the environment (Ibid). While Morena et al. (2020) argues that Just Transition is a concept deeply rooted in the history and geography of the U.S. unions from the 1970s, it is therefore essential to note that the experience of workers in other contexts also contributed to complement the mere quantitative focus on *more money, less work* with a qualitative reflection on *what, how and how much to produce* (Feltrin and Sacchetto, 2021)[2]. Likewise, James O'Connor's (1988) theoretical contributions provide a critical lens through which analyze these dynamics, highlighting the complex relationships between capitalism, labour and the environment. O'Connor, one of the best-known and earliest exponents of eco-Marxism, summarizes in an essay his thesis on the second contradiction of capitalism, namely the way in which capitalism undermines its conditions of production and the biological basis of its existence[3]. Within this framework, according to

measures for workers and communities with the intension of integrating environmental and social justice in relation to the most vulnerable and marginalized populations in the U.S.

[2] Beside this stream of literature based on the concept of Just Transition and how it has been originally rooted within workers' struggles in Western countries, recent academic contributions have also stressed the contribution of Indigenous perspectives within the decolonial debate on sustainable development. Indeed, authors several authors (Kimerrer, 2013; McGregor, 2004; Bauer et al. 2022) illustrate how Indigenous perspectives can shift paradigms of sustainability by aligning practices with cultural values and ecological responsibilities. In particular, they argued that understanding the historical context of colonization is essential to address contemporary issues faced by indigenous people (Tuck and Yang, 2012), and it therefore vital to emphasize that discussions around sustainability must also include the voices and rights of Indigenous communities, who are often disproportionately affected by environmental degradation.

[3] According to O'Connor, the crises of capitalism are primarily due to the explosion of contradictions, not only those internal to social relations, but also those related to biological resources that the system does not produce. Since the current capitalist crisis is also an ecological crisis due to productivism and development as an end in itself,

O'Connor (Ibid) the role of the State is to act as a necessary mediator in the renewal of the conditions of production distorted by the processes of accumulation, thus politicizing the conditions of production and enabling further social struggles to intervene against the capitalization of nature. Indeed, the concept of Just Transition and the increasing attention between environmental and labour conditions, started to be integrated within global climate governance and within the discourse of international organizations such as the International Labour Organization (ILO) and the United Nations Environment Programme (UNEP) and began to be associated with the concepts of *green and decent jobs* (ILO, 2015) and *green economy* (2011). At the 2009 Conference of the Parties in Copenhagen, the International Trade Union Conference (ITUC) presented the Just Transition as "a tool the trade union movement shares with the international community, aimed at smoothing the shift towards a more sustainable society and providing hope for the capacity of a green economy to sustain decent jobs and livelihoods for all" (ITUC, 2009). Considering the political approach adopted by national and international institutions, according to Leonardi (2023), there is a gradual shift towards an approach that increasingly focuses on the costs of adapting to and mitigating the effects of climate change – an option that can be viewed more as stabilizing rather than addressing the roots of climate change. This shift is translated into the increasing role of policies aimed at reducing global emissions, such as carbon trading for the allocation and exchange of carbon emission permits through market mechanisms, or by imposing fees and mandatory payments to countries and industries that contribute more to pollution and environmental degradation.

On this regard, Velicu and Barca (2020) emphasize that the progressive globalization of the concept of Just Transition and its integration into institutional frameworks have contributed to consolidating an approach that prioritizes compensation strategies in response to the inevitable job losses resulting from the transition to decarbonization[4]. Despite these intentions, current EU policies often overlook structural issues such as occupational segregation and gendered labor dynamics, which could perpetuate existing inequalities. Novello and Carlock (2019) stress the need to define "green jobs" in ways that incorporate the rights of women and marginalized

environmental problems can be seen, according to O'Connor, as the consequence of a contradiction in capitalist development between the productive forces, the existing relations of production and the conditions of production.

[4] To facilitate these changes, regional and international strategies advocate for investments in reskilling and training programs that are necessary for workers' transitioning into green sectors (Vandeplas et al., 2022; ILO, 2015). Many workers indeed face significant challenges when seeking jobs in the new emerging green market, particularly when their existing jobs become obsolete.

communities. Furthermore, Kwak and Casey (2012) argue for a climate policy framework that addresses systemic inequalities. Aligning to these critiques, Velicu and Barca (2020) argue that these processes have contributed to the mainstreaming of the concept of Just Transition, undermining its original transformative potential. The authors argue that while environmental and social crises arise from and reinforce underlying inequalities, Just Transition should not only move away from fossil fuels, but also challenge unequal power dynamics (Ibid). From this perspective, various analyses have highlighted how Just Transition could lay the groundwork for potential convergence, useful for defining public spaces and institutions oriented towards more radical pathways of transition. According to White (2019), recognizing how feminist, climate justice, and decolonial contributions and struggles have expanded and complicated the understanding of labor transition, the concept of Just Transition can be instrumental in designing transitions and charting a path for the convergence of anti-racist, feminist, and eco-socialist movements. Certain strands of literature have also illuminated the potential of adopting a perspective grounded in Just Transition to critique the ways in which production is organized to exploit labor and nature. This perspective, particularly embraced by scholars in the field of environmental labor studies[5] (Räthzel & Uzzell, 2013; Stevis et al., 2018), aims to address the nexus between transition and labor by considering opportunities for improving working and living conditions through an analysis of labor's impact on nature and natural resources. When the ILO published the "Guidelines for the Transition to Environmentally Sustainable Economies and Societies for All" in 2015, it reiterated the need for a transition that also meets social inclusion goals and aims to create "decent jobs for all" (ILO, 2015).

As highlighted by White (2019), while the ILO acknowledges the importance of workers in the green transition and the future of climate politics, it currently gives limited emphasis to fostering a reflective participatory approach that would empower workers to envision the kind of future society they desire and actively contribute to designing the transition towards that vision. Rather, at both the international and European levels, political strategies aimed at addressing the effects of

[5] Environmental labour studies encompass the body of literature contributing to understand the intersection of environmental issues and labour dynamics by examining how environmental changes, policies and practices influence labor dynamics and vice versa. This body of literature emerged as a response to the recognition that environmental sustainability and social justice are deeply interconnected and that addressing one without considering the other can lead to incomplete solutions and unintended consequences. The Palgrave Handbook of Environmental Labour Studies (2021) provides extensive and meaningful contributions from scholars across the globe exploring the relationships between workers and nature in the context of the environmental crisis by providing elements of environmental studies, environmental struggles of workers, indigenous peoples, farmers in the Global North and Global South.

the green transition on labor include recommendations for promoting decent work, social protection, and dialogue to foster inclusive growth and sustainable development. However, addressing these limitations also requires continuous dialogue among stakeholders, adequate resources and funding, and promoting consistency and coherence among different policies, as those promoting green transition and climate action may not always align perfectly with policies supporting job creation, social protection, and fair wages. To this extent, studies (Stevis, 2023; Vandeplas et al., 2022; ILO, 2015) also stress how the potential job growth following green transition policies, which mostly encompass sectors requiring technical and STEM skills which are historically patterns where a significant gender imbalance comes into play, are likely to exacerbate already existing imbalances that act of the gender and race line. Indeed, in addition to the gender dimension, the role of migrant and racialized workforce within the green transition is vital. Stevis (2023) calls for an examination of spatial scales concerning labor transition and highlights the necessity of adaptable workforce equipped to meet demands across different context. Although many reports address the climate change-migration nexus, there has been limited academic focus on migrant labor's role within the green economy. The empirical study conducted by Botticello et al. (2016) within the resource recovery industry od Northern EU countries, illustrates that resource recovery work, often viewed as "clean and green", obscures the *dirty work* (Ibid) itinerant and migrant workers – often coming from accession EU states like Poland or Romania. Although the results of this study cannot be generalized, they do provide a valuable contribution to the existing literature on the subject of the green transition and its impact on migrant labour, helping to define some of the trajectories of continuity that can be observed in the role that migrant labour assumes within global value chains.

It is therefore worthwhile exploring in greater depth the space that migrant labour, traditionally associated with forms of work that are often trapped in temporary precarious contracts and working under less favorable conditions than local workers, may have in the green transition. As Wallerstein (1998) asserts, within the international labour market "racism aims to keep people within the labour system, not to expel them". Therefore, the concept of "differential inclusion" introduced by Mezzadra and Neilson (2014) draws parallels and boundaries between forms of filtering and governing labour mobility that are subject to varying degrees of subordination, command, discrimination and segmentation. Consequently, the prospect of a Just Transition is contingent upon the incorporation of migrant labour as a pivotal and integrated dimension of

labour. Furthermore, given the focus of this research on investigating the effects of the green transition in the agri-food sector – where the migrant workforce plays a pivotal role – an in-depth examination of the role played by migrant labour is both inevitable and necessary. A growing body of literature has indeed highlighted how neoliberal restructuring of agri-food systems has increased reliance on waged labour (Jones et al., 2022; Smith et al., 2021; Wang et al., 2020). This shift has resulted in the need for a workforce that is both inexpensive and adaptable to meet the demands of cost pressures and the just-in-time production methods imposed by agri-food retailers (Corrado et al., Lo Cascio and Perrotta, 2022; Nieto and Hellio, 2017; Burch and Lawrence, 2009). This structural dependency on non-local labour has profound implications for the agri-food sector, as it renders it increasingly vulnerable to external shocks and dynamics.

The growing concern about ecological degradation and its ties to labor exploitation underscores the urgency of addressing structural inequalities within the green transition framework. To this extent, the European Green Deal aims to address the EU transition towards a sustainable economy by reducing greenhouses gas emissions and promoting renewable energy sources. However, this ambitious agenda raises significant questions about its implications for labor markets and the conditions experienced by workers in the agri-food sector. Given the agrarian focus of the Green Deal and of its Farm to Fork (F2F), the interplay between environmental sustainability and labor dynamics within the agrifood sector becomes crucial. As the EU is currently navigating the challenges of promoting the objectives of the 2010 Green Deal, the intersection of Just Transition, labor dynamics and environmental sustainability in the agri-food sector are the very center of the analysis of this chapter. This section therefore aims to establish a foundation for linking the issue of the green transition and its impacts on labor with contemporary debates in rural sociology and agrarian studies. This connection is crucial for understanding the dynamics that have transformed agri-food chains in the Mediterranean context, particularly in Italy, which is the focus of the empirical analysis. As a region significantly affected by industrialization and capitalization processes, Mediterranean countries exhibit a pronounced division of labour, further intensified in recent years by the influx of migrant labour. Alessandra Corrado (2018) suggests that "a reading of migration and agricultural change in the Mediterranean area (...) should be placed in a broader historical frame that includes the socio-economic and political dynamics under which the conditions of mobility and the valorization of labour and capital are defined". To this extent, the food regime theory allows to interpret changes within the agri-food systems by considering the

interactions between space and time, examining the historical relations between agriculture and industry within increasing transnational capital movements. This theory indeed identifies distinct food regimes as specific periods in the history of global agriculture that are characterized by unique patterns of production, distribution and consumption aligned with broader economic and political structures (Friedmann, 2005; Friedmann and McMichael, 1989). According to Harriet Friedmann (2005), the first food regime (1870s-1930s) was shaped by colonial relations, where European countries imported inexpensive food and raw materials from their colonies, favouring industrialization and therefore allowing employers to maintain low wages for their workers, who were still able to afford cheap food products. The second food regime, emerging post-World War II and driven by the U.S. was marked by agricultural industrialization, mechanization and the rise of agribusiness, which together were leading to agrarian reforms in both Western economies and developing countries that promoted market relationship and global specialization of agricultural production (Friedmann, 1982). The third regime, identified by Freidman and McMichael, is termed the corporate food regime, driven by neoliberal globalization and by the influence of transnational corporations that liberalized agricultural trade and financialized food markets. Friedmann (2005) notes the convergence of environmental politics with the retail-led reorganization of food supply chains which have finally culminated in the emergence of a corporate environmental food regime.

The aim of this chapter is therefore to provide some elements of the academic debates around the increasing relevance and awareness of the concept of Just Transition and sustainable development, in order to show how these priorities, especially considering the agri-food transnational supply chain, constantly collide and connect with other processes and dynamics at a global and transnational level.

In light of the urgency emphasized by Corrado et al. (2018) to contextualize the transformations in Mediterranean agriculture within a broader historical and socio-economic framework, the following sections aim to illustrate several significant changes that have shaped global agri-food chains over the past few decades. Initially, this chapter examines the increasing concentration of agricultural land and the financialization of agricultural practices within the Mediterranean context, particularly in light of the decline of family farming in the European Union. This growing trend reflects broader patterns of capital accumulation and the shift towards large-scale agricultural enterprises that prioritize profit over traditional farming methods. Subsequently, the discussion will turn to the crucial role of migrant workers in the agri-food sector. It will highlight how the

industry's reliance on a cheap and flexible workforce (Gertel and Sippel, 2014) is significantly influenced by the migration policies of EU countries. These policies often facilitate the influx of migrant labor which is essential for meeting the labor demands of an increasingly industrialized agricultural landscape. The chapter will then address the restructuring of global agri-food supply chains, focusing on the progressive verticalization and hierarchization of supply chain structures. This aspect illustrates how power dynamics within the supply chain have shifted in favor of larger corporations, resulting in a more centralized control over production and distribution processes. Furthermore, the text will explore the central role of intermediation, particularly as private certifications have driven a new "quality turn" in global food consumption patterns. The emergence of this certifications highlights the growing importance of quality assurance in consumer decisions and the influence of market intermediaries in shaping food supply chains dynamics and power relations. Finally, the integration of environmental concerns into food production and consumption practices will be presented as a defining characteristic of the corporate environmental regime. This aspect reflects how contemporary agri-food systems increasingly attempt to reconcile economic objectives with sustainability issues, addressing the complexities of environmental impact in the context of global food production.

1. Land concentration and financialization of agriculture

The European agri-food sector is characterized by a high level of diversification, with farms specializing in a wide range of crops and livestock. In the Mediterranean context, both EU and Northern African countries have been experiencing a process of capitalization and commodification of land that has favored the integration of large agribusiness actors into supply chains, influenced by international institutions that promote transnational business interests (Corrado et al., 2018). Therefore, with the beginning of the mid-2000s, agri-food system has become a financialized sector as actors, as specialized farmland investment managers and intermediaries, introduced new logics within a rural land market that was previously dominated by small family farming activities (Bjørkhaug and Lawrencea, 2018). This process of agri-food financialization[6], has gradually been employed to describe and explain significant changes within

[6] Financialization of the agri-food sector refers to the process of increasing dominance of financial motives, financial markets, actors and institutions that started in the late 20th century, particularly after the deregulation of financial markets in the late 1980s and 1990s when new actors such as hedge funds, pension funds, and private equity firms,

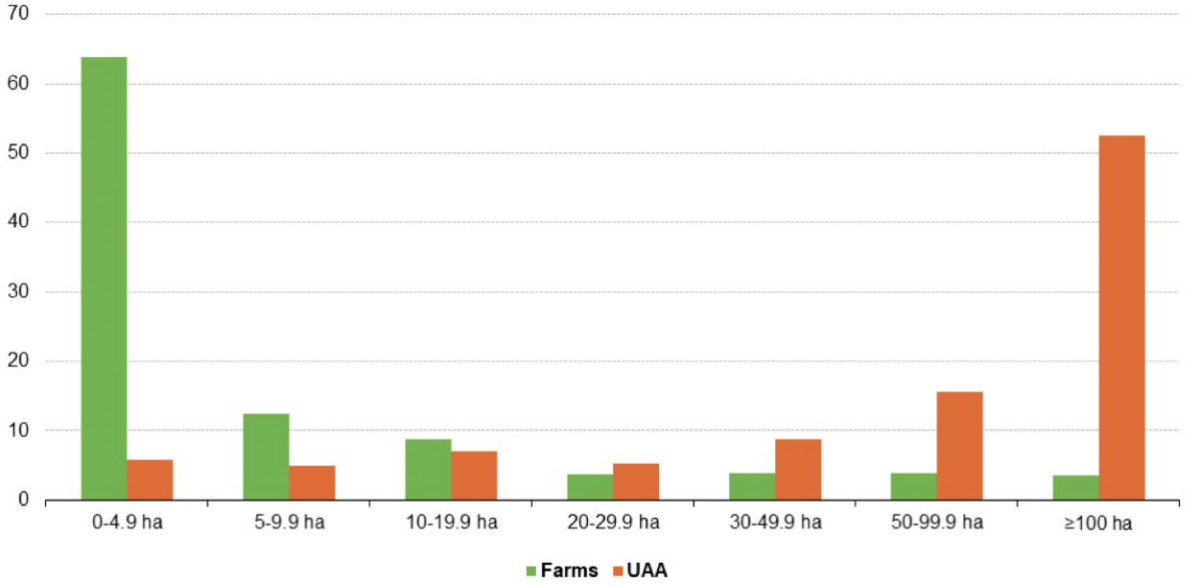
an evolving production-based system dominated by finance (Ibid). Financialization has therefore underpinned instances of land concentration, value chain grabbing that have driven the rise of élites and multinational corporations favored by states benefit (Sommerville, 2018).

Several authors (Borras et al., 2016; Kay, 2016) stressed that, despite the debate around the increasing large-scale of agricultural lands, Europe is often overlooked due to its apparent showcase of good land governance and well-regulated land markets. However, the EU presents extreme levels of land concentration throughout its Member States. As demonstrated in Figure 1, data from Eurostat (2020) indicate that while the majority of EU farms (over 60%) are family farms, with 50% of the regular agricultural labour force being provided by family members, it is the largest farms (with a size of 50 hectares or more) that manage almost two-thirds of the utilized agricultural area (UAA)[7]. Moreover, Figure 1 shows an inverse correlation between farm size and cultivated agricultural area. In 2020, the smallest farms, with an annual economic output of between EUR 2,000 and EUR 8,000 per year, accounted for approximately 67% of all European farms. However, the largest farms, with an output level of around EUR 250,000 per year, were responsible for most of the agricultural economic output in the EU. Additionally, the surface area allocated to organic agricultural production has also increased, rising from 7 million hectares to 15.9 million between 2012 and 2021, representing a 9.9% increase (Ibid).

joined the market. In this context the trading of agricultural commodities has increased, leading to greater price volatility and speculation and farmland became a target for investment with institutional investors viewing it as a stable asset with long-term returns. Philip McMichael has broadly explored the effects of financialization on global food systems and in 1994 published "The Global Restructuring of Agro-Food Systems" (Cornell University Press) which focused on the role of financial capital in shaping agricultural production and distribution.

[7] The EU has also implemented several initiatives through its Common Agricultural Policy (CAP) to address the challenges of agricultural sector aging and abandonment that also deal with agricultural areas and financialization. On this regard, one of the key objectives of the CAP is to promote the aggregation of agricultural areas in order to facilitate the consolidation of farms to enhance their competitiveness and sustainability. According to the European Commission (2018), the CAP indeed aims to modernize and enhance the sustainability of European agriculture, ensuring that farms remain viable and attractive, especially to young farmers. In this context, the Rural Development Programs (RDPs) funded by the EU play a crucial role in improving agricultural competitiveness and supporting economic diversification in rural areas. While recognizing the limits of agricultural land concentration, some authors also underscore the importance of farm aggregation in Europe. For instance, a study conducted by Van der Ploeg et al. (2016) explores how cooperatives and associative forms can effectively respond to industry challenges, including the erosion of agricultural bases.

Figure 1. Distribution of EU farms and utilized agricultural area according to farm size (%, 2020)



Note: There are some differences in the threshold applied by some Member States, often to exclude the very smallest agricultural holdings which together contribute 2% or less to the total UAA excluding common land, and 2% or less to the total number of farm livestock units.

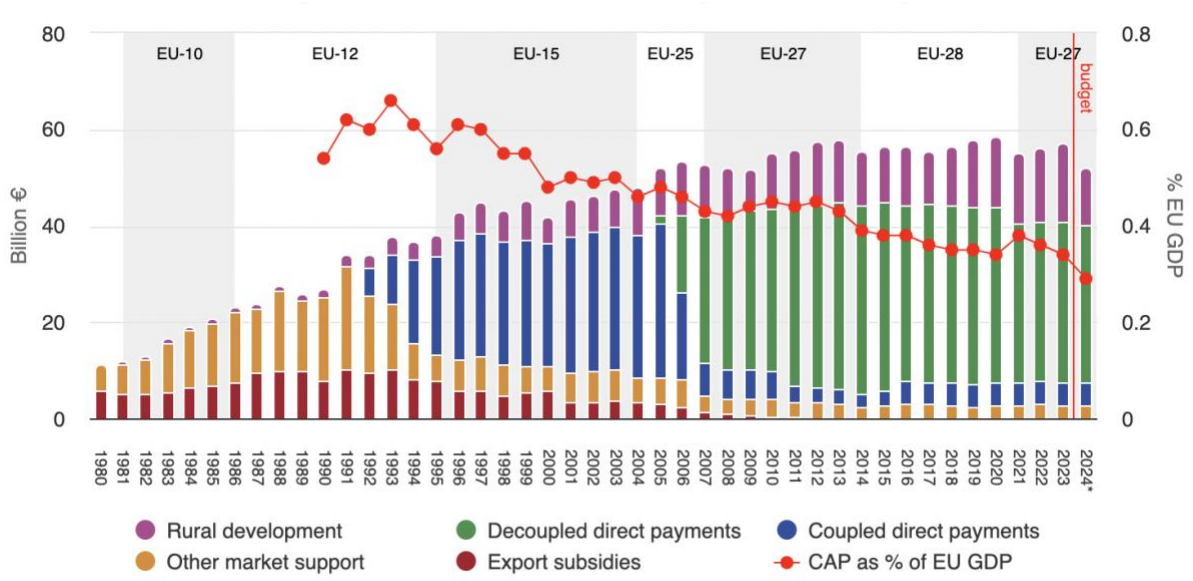
(Source: EuroStat)

Several factors contribute to these structural changes in agriculture, including the varying profitability of farming which is influenced by aspects such as the costs of inputs and outputs, differing levels of efficiency in farm management, and the distinct impacts of agricultural policy tools, including government payments and the overall policy environment (Plogman et al., 2022). According to van der Ploeg et al. (2015), the process of concentration of cultivated land has been a defining feature of the EU context since the beginning of 2000s. This period has indeed seen significant changes in EU CAP and in the regulations concerning production subsidies and land-related payments, progressively reducing support for small farmers (Corrado et al., 2018). Despite a significant increase in production subsidies over time, their allocation has strengthened the food industry and favored the penetration of international businesses. Between 2000 and 2011, production subsidies increased from an initial value of EUR 2 billion, to a final figure of EUR 50.9 billion, a period that also saw increasing concentration of land ownership (EU Commission, 2012). These changes are also related to the significant changes in the priorities and policies that guided CAP reforms over time. Indeed, during the 1980s, CAP spending was mainly on price support

through market mechanisms (e.g., public purchases, also referred to as interventions, and export subsidies) which rose by the of the decade due to agricultural surpluses. However, in 1992 direct payments were introduced, and with the Agenda 2000 rural development was introduced as a second pillar favoring a progressive increase of expenditures. On this regard, as confirmed by Figure 2, CAP expenditures destinated to direct payments to farmers (green and blue columns) have indeed progressively increased in the last three decades (EU Commission, 2021)[8]. In this context, the decoupled payments received by farmers per hectare of farmland played a relevant role, as they are decoupled from agricultural production and are often even higher than rent payments. According to the Farm Accountancy Data Network (FADN), decoupled payments in most EU countries are higher than rent payments, influencing decisions to acquire additional land as this is allows to get access to increasing EU payments (FADN, 2022). Another element that favors land accumulation is linked to transaction costs, which play a role in land markets and ownership rights. In some cases, these costs contribute to a preference for leases as full ownership is much more costly (Korthals Alters, 2022).

[8] The graph shows the evolution of the expenditures of the CAP over time. The increase in the funds destinated to direct payments – particularly with the beginning of the XXI century – were aimed at modernizing and making the agri-food market more competitive and dynamic in the global market. Between 2006 and 2007, there was a significant increase in direct payments to farmers under the EU's CAP. This rise can be attributed to several key factors associated with policy reforms and market dynamics. As highlighted by the EU Commission (2008), "in the period 2006-2007, direct payments increased significantly in reaction to changes in agricultural markets and to address the internal and external challenges of the sector".

Figure 2. CAP expenditure and CAP reform path (current prices).



(Source: EU Commission website)

To this extent, in several Central and Eastern Europe (CEE) countries many small landowners with large tenants consolidate land holdings in larger scale corporate farms (Ibid). Indeed, within the EU, the geographical distribution of UAA and the phenomenon of land accumulation are uneven, with some regions and countries more significantly affected by this process, especially following EU enlargement and the creation of agricultural policy programs that favored the intensification and industrialization of agricultural production, although the initial aim was to reduce the dissimilarities among EU countries (Popescu, 2019). To this extent, land accumulation has become particularly evident in EEC where the post-Communist land privatization process has contributed to ambiguous outcomes and to the rise of a class of private landowners – often from Western European countries - with significant capitals and powerful political ties that reduce the chances for small farmers to remain competitive (Kay, 2016). In some cases, such as for Romania, land grabbing has therefore been increasingly conditioned by national and EU political and legislative frameworks adopting a productivist approach to agriculture aiming at liberalizing food trade and therefore favoring the rise of a large apparatus for large-scale land investments (Franco, Borras, 2013). Between 2000 and 2006, Romania has also been benefiting from the Special Accession Programme for Agricultural and Rural Development (SAPARD) fund, designed by the

EU to prepare rural economies of new member states to EU accession. In this framework, Romania received over 15million of non-repayable subsidies to finance farmers' modernization projects, most of which were already direct towards larger production units (Ibid). Therefore, different modalities of CAP subsidy regime contributed to agricultural land accumulation, favoring large élite of farmers while marginalizing small farming. Furthermore, this process doesn't necessarily coincide with an increase in agricultural production. And despite Romania hosts almost one third of European farms, it accounts for only the 3.3% of EU agricultural production, while the 60,2% is produced in only four countries: Italy (18,1%), France (17,1%), Germany (12.6%), Spain (12.2%) (Eurostat, 2020).

While the role of EU agricultural policies has been central in increasing the direct payments to farmers, and in linking them directly to the cultivated area, Friedland (1981,1991) was among the pioneering scholars to illuminate how the transformations within the agricultural sector, were particularly linked to the erosion of family farms and their declining contribution to overall production. Despite the contradictory outcomes, the progressive increase in direct payments has been identified as one of the primary measures through which the EU has sought to provide support to farmers, attempting to respond to the penetration of capitalistic relation into agriculture. This has led to significant structural changes, resulting in both the concentration of production and the proletarization of labour within this sector (Ibid; Sotte, 2023). As capital investments intensified, small-scale farms struggled to maintain their viability, ultimately favoring the consolidation of agricultural land in the hands of fewer, larger entities. This phenomenon not only undermined the traditional family farming model but also shifted labor dynamics, with many rural workers becoming increasingly dependent on wage labor rather than owning or managing their own agricultural enterprises. Bonanno et al. (2014) further elaborate on this trend, claiming that the changing nature of agricultural production is closely linked to broader economic processes that prioritize efficiency and profit over the sustainability and independence of family farms. From the perspective of rural communities, this concentration of land in the hands of only a few, and in many cases even absent owners, has also led to a progressive deterioration in the vitality and sustainability of agricultural activities. Within Mediterranean agricultural areas, this process not only concerns smaller farmers struggling to remain competitive within an industrialized agriculture, where larger farms are more integrated within globalized networks, but is also linked to the rise of export-oriented enclaves often located on coastal area, while internal and mountain

areas have progressively been abandoned (Corrado et al., 2018; Moraes et al., 2012). Moreover, the concentration of land and the growth of large-scale farmers, also led to an increased intensification of production processes and to more specialized production farms to follow a strategy for reducing production costs and therefore satisfying the increasing demand for cheap food (Roest et al., 2018). Numerous farms therefore started to specialize in intensive crops of fruit and vegetables and breeding, also thanks to the growth of plantation density, mechanization and expansion of irrigated areas. Agriculture therefore started to shape and transform rural landscapes with monocultures, huge expanses of greenhouses and intensive livestock farms, taking the place of smaller family farms. Despite the intensification of land use, and the rise of monoculture farms were demonstrated to be less resilient in their capacity to adapt to economic and environmental changes CAP's direct payment scheme still disincentivized the diversification of crops and the emergence of small farming activities (Gorton et al., 2009). Indeed, besides the social and economic impact of agricultural concentration and industrialization over rural communities, the environmental impact of agriculture also increased leading to significant problems in terms of ecological and social sustainability. On the other side, large-scale farming activities and agricultural enclaves, present a high capacity of persistance and continuity, ensuring continued survival and expansion and therefore imposing important contradictions in terms of ecological and social sustainability (Pedreño, 2014). Besides increasing aggregate yields per unit area, agricultural intensification is also driven by changes in inputs like fertilizers or high-yielding crop varieties. Therefore, environmental impacts of changes in agri-food production arise from the inputs used in the production process, and because of the intensification process itself. Yield improvements might indeed impact the environment by affecting the profitability of relative prices, while fertilizers and monoculture might also have important ecological and environmental impacts. Looking at the direct impacts of land intensification, this mostly results in the expansion of land under production, leading to negative environmental impacts due to habitat and biodiversity loss, greenhouse gas (GHG) emissions and changes to local hydrology and ecosystems (Bais-Moleman, 2019; Garcia, 2020).

Recognizing the increased environmental impact of agriculture, within its overarching framework for the implementation of environmental and climate related targets, in the last years the European Green Deal identified some guidelines also to deal with soil protection, intending to improve the alarming situation of European soils (EU Commission, 2019). Indeed, recognizing

how intensive monocrop farming has degraded European soils, and the acknowledging the limits of CAP measures in addressing the environmental impacts of agriculture, in the early 1990s, the EU Commission already introduced environmental "command and control"[9] measures and market incentives aimed at increasing the environmental sustainability of agriculture. Later, the 2020 European Green Deal became the most relevant policy framework for achieving these goals. However, neither the Green Deal nor the F2F Strategy explicitly address the limits of land accumulation as a standalone issue, rather including measures and objectives that might indirectly impact land use, land ownership and the sustainability of agricultural practices and therefore influence the dynamics of land accumulation. The reduction of chemical and hazardous pesticides by 50%; the reduction of fertilizer use by 20%, the achievement of a quota of 25% of EU arable land dedicated to organic farming, were among these goals and the efficient soil management became one of the CAP specific objectives for the 2023-2027 period (EU Commission). However, as Hauser (2022) stressed, these developments are unlikely to be effective and changes in agri-food systems cannot be brough by the CAP and the Green Deal alone, but rather require a comprehensive performance-based system based on a set of coherent and well-coordinated environmental policies directly addressing soil-related issues. From the perspective of this research however, analyzing land accumulation is essential to comprehend the historical development and economic policies that ruled global market dynamics in the last decades. This would indeed allow to better capture how intensive and industrialized farming are representing the dominating production model, and how this phenomenon interacts with actors at different levels of the production chains while favoring the concentration of production factors (land, capital and work). Within only three decades industrial agriculture has integrated and absorbed small scale family farming into an industrialized part of the global agri-food complex, while changing retail patterns and consumer demand for year-round supply has favored the relocations of industries in different EU countries (Gertel, Sippel, 2014). Moreover, this concentration of production factors (land,

[9] The EU has introduced "command and control*"* measures to promote greater sustainability in agriculture primarily through the Nitrate Directive (Council 91/676/EEC) and the Agri-Environmental Measures under the CAP. These measures were first introduced in the early 1990s and were further expanded in subsequent CAP reforms. They incentivized farmers to adopt environmental-friendly farming practices, including organic farming, conservation agriculture and the maintenance of high nature value farming systems. For instance, in 2003 the CAP reform introduced the concept of *cross-compliance* linking direct payments to farmers' compliance with basic standards concerning environment, food safety, animal and plant health, and animal welfare. More recent reforms have further emphasized "greening" measures, where a portion of direct payments is contingent on environmentally beneficial practices.

capital, work) came at the expenses of low-cost migrant workforce that represent almost the majority of the population employed within the agri-food sector.

2. Increased presence of migrant workers in EU agri-food supply chains

This transformation from small-scale farming to industrialized global agri-food production, has also shaped the patterns of exchange between capital, labour and agricultural commodities as the decline of family farming also corresponded to the increase of wage labour (Gertel, Sippel, 2014) leading to a structural dependence on non-local labour force (Corrado et al., 2018). Between 2011 and 2017 in EU countries more than 1.3 million national agricultural workers left the sector, an outflow that was indeed partially offset by inflows of both intra-EU and extra-EU migrant workers which respectively increased by 36% and 31% over the same period, corresponding to an increase from 4.5% to 6.5% in the share of migrants over total employment in EU agriculture (Augère-Granier, 2021). This trend that has been driven especially by Spain and Italy, where the share of migrants employed in the agricultural sector is consistently higher compared to the share of migrants employed in all the other sectors. Indeed, although this process is not limited to agricultural work, within the EU context the significant changes in the composition of farmwork labour force has mostly been driven by the constant increase of foreign workers employed as wage workers in agriculture. This process has already been illustrated by Friedland (1981, 1991), highlighted how in the United States, the erosion of family farms and their reduced contribution to production corresponded to the penetration of capital and capitalistic relations of production in agriculture engendering the concentration of production and the proletarization of labour in this sector (Bonanno et al., 2014)[10]. The presence of foreign farmworkers became significant since the 1990s, although the first migrants started to arrive in Southern countries already in the 1970s (for example Albanians and Bulgarians in Greece and Tunisians in Sicily). Despite the continued increase in the number of non-EU workers employed in agriculture, Romania and Poland remain

[10] The central role of migrant labor within the agribusiness sector was already present in the late 1800s and early 1900s. Max Weber between 1892 and 1897 focused on analyzing the conditions of agricultural workers in Germany and their role in the modernization process of the sector by exploring the economic dynamics linking the countryside to industry. In the U.S. context, in 1939 Carey McWilliams published "Factories in the Field: The Storiy of Migratory Farm Labor in California" in which she analyzes and describes the living and working conditions of farm laborers, particularly those from Chinese, Japanese, Mexican, Filipino and Armenian ethnic groups exploring the conditions and dynamics of exploitation, labor struggles and racial tensions that characterize the California agricultural industry

the main countries of origin of seasonal workers employed in EU countries (EU Commission, 2023). Therefore, while farmers require an abundant cheap, flexible and often seasonal workforce, migrant labour is the best to fill such needs (Corrado et al., 2016). From this perspective, the 2020 COVID-19 pandemic highlighted the inherent paradoxes and clashes of EU priorities. While many Member States were attempting to contain the spread of the virus adopting extraordinary measures such as border controls and closures, they were also facing a severe shortage of foreign labour force in their agricultural sectors, at a time when their presence was critical to ensure the harvest of spring fruit and vegetables (EU Parliament, 2021). At both the national and European levels, Member States governments defined special programmes for the just-in-time supply of seasonal workers that were essential for the reproduction of EU population **(**Tagliacozzo et al., 2021**).** Bilateral partnership agreements between European members states and non-European countries are actually crucial for EU intensive agricultural production schemes (Gertel, Sippel. 2014) and the framework within which labour is secured to this sector follows a system of an hoc regulation scheme that has a much older origin. As early as 1945, the French government established the *Office National d'Immigration* (ONI) to recruit workers for Southern Europe and from former colonies (Morice, 2008; Décosse, 2016). Subsequently, Spain adopted the *contractos en origen* scheme to facilitate the entrance of agricultural workers from Romania, Morocco and Senegal (Hellio 2014, 2016), while Italy since 1998 introduced the *Decreto Flussi* to regulate the entrance of non-EU workers on the basis of employer's requests for labour force. The centrality of these agreements in securing the necessary labour force for the agro-industrial sector is therefore intrinsically linked to the high dependency of the overall agricultural labour market on seasonal and precarious labour.

To this extent, it is of interest to consider the various meanings of the term *seasonality* when referring to agricultural work. The first conception of *seasonality* refers to those who work on a seasonal basis under fixed-term contracts, which can therefore be distinguished from regular long-term workers. Secondly, seasonality refers to those sector that are primarily characterized by a high presence of seasonal workers (especially in the agricultural and tourism sectors). However, this understanding of seasonality might overlook those who work beforehand and off-season, to provide seasonal goods, as often occurs within agricultural enclaves (Medland, 2017). Finally, the EU definition defines as a seasonal worker as "a third-country national who retains his or her principal place of residence in a third country and stays legally and temporality in the territory of

a Member States to carry out an activity dependent on the passing of seasons, under one or more fixed term work contracts concluded directly between that third-country national and the employer established in that Member State" (Directive 2014/36/EU). However, when dealing with seasonal work it is also essential to consider that migrant workers themselves often perceive agricultural work as temporary, precisely because of the low wages, of the challenging working conditions and the difficulties of living in marginal and rural areas from which they often seek to flee in search of more favourable working conditions (Corrado et al., 2016). In this context, Alberti and Sacchetto (2024), stress how labour mobility and turnover are not only dependent on the growth or decline in labour demand within a firm. Rather, they argue that the relationship between migration and turnover is crucial to understanding the struggles of workers for mobility as migrant labour can be used by employers to gain access to docile labour, but under different circumstances, it can also enhance voluntary or worker-driven turnover. This is exemplified by migrants who acquire mobility rights through freedom of movement and are therefore able to leave their jobs without losing their residence or welfare entitlements (Ibid). According to a report from the EU Commission exploring the trends of mobile seasonal workers in the EU labour market, the visibility of EU seasonal workers in statistics and literature has decreased since the eastward expansion of the EU when thousands of citizens from new Member States gained the status of EU citizens and therefore residence or work permit were no longer needed (EU Commission, 2023). This meant that registration requirements for them practically disappeared, often contributing to downward competition on wages and often increasing rivalry between European and extra-European workers.

However, the characteristics of migrant labour within EU market changed over time due to the different nature and composition of migratory flows, to the evolution of the global structure of value chains, but also due to the different migration management policies adopted by the EU and by its Member States over time. Initially, the growing presence of migrants within the EU has contributed to the blurring of boundaries between legality and illegality in the European context, especially in Southern countries where migrant workers were more present. According to King et al. (2000), one of the main characteristics of migration mobility patterns during the 1970s and 1990s, was the high degree of irregularity. This was mainly due to the absence of transnational regulations that therefore favored the *illegalization* (Ibid) of migration resulting in a strong level of informality also concerning labour relations. A model based on the demand for flexible and

cheap migrant labour, to be employed in secondary and informal labour markets, was therefore gaining momentum, often characterized by low wages and illegal or semi-illegal labour forms. Beside these aspects emerged at first in Southern EU economies, ongoing transformations of migrant management and EU migration policies contributed to a progressive *refugeezation* (Rigo, Dines, 2015**)** of parts of the migrant workforce that was taking place all over the Europe, hiding the challenges and discriminations faced by migrant workers, behind their status of refugees or asylum seekers. To this extent, analyzing the agri-food labour within the Southern Italian context, Rigo and Dines (2015) criticized this process of *refugeezation* as it contributed to give preeminence to human rights violations over labor relations in the representation of migrant workers conditions and therefore to decrease the centrality of labour migration within the public discourse. To this extent, the authors argue that media's attention to semi-slave-like conditions and gangmaster systems (e.g., caporalato) tends to hide the centrality that migrant labor acquired within agri-food industrial relations, rather favouring a human-rights discourse. Therefore, while slavery, gangmasters and organized crime refer to levels of exploitation that go beyond what can be considered an "acceptable" form of exploitation evoking longstanding notions of a backward, violent and exceptional Mezzogiorno, while overlooking the effects of the process of industrialization and globalization that has reshaped both Italian agriculture and global value chains over the last decades (Ibid).

While EU governments on one side were defining bilateral agreements to ensure the entrance of workers from third countries, on the other side, during the 1990s, national and European migratory policies became increasingly restrictive leading to the creation of what De Genova and Peutz (2010) termed the *deportation regime.* To this extent, they were referring to the normative division enacted between more or less "rightful" members (citizens) and "rightless" nonmembers (migrants) that has become the determinant of an individual's freedom to move across spaces, establishing also a differentiated access to national and labour markets on the basis of the regulation of migratory movements (Ibid). Illegality is therefore produced by States by reducing migrants' possibilities to regularize their position within the EU and placing them in more vulnerable positions. Therefore, even if migrants are not necessarily deported, their experience of illegality still place a disciplining role on migrant workers, whose right to reside in the EU still rely on an employment contract (Ibid). On the other side, Ambrosini (2018) stressed the general tolerance that is often deserved to irregular migrants, particularly when they legitimize their

presence by working in sectors where labour shortage represents a common problem. To this extent, the author stresses the case of Southern Italian rural areas, where the use of irregular migrant labour is tolerated and sometimes even institutionalized by various local actors (NGOs, employers, trade unions) which often provide shelters and services.

Considering the agricultural sector, this process of labour mobility, together with the industrialization of global agriculture, has also contributed to shape spaces and territories, driving new economic, social and environmental dynamics that remain strictly linked to the transformation of labour regimes and migration regimes. The industrial development of agriculture adapted to the needs of the various actors involved along the production chain, and responded to the urgency to produce and reproduce a cheap and flexible labour that answered to the pressures and demands of big retailers and large business companies dominating the supply chain. The development of agricultural enclaves to this extent, responded to the need to meet the intense labour demands generated by industrial large-scale agricultural production (Gadea, 2017). Such territories are subject to an intensive agricultural activity where the elements of production (land, capital and work), are concentrated and the agricultural activity is subordinate to the large-scale supply chain and to large business actors (Pedreño et al., 2014). The expansion of production scales, the standardization of distribution channels and production process has often forced local producers to improve their position in global agri-food supply chains by relying on migrant and vulnerable workforce. To this extent, Bair and Werner (2011) have stressed how this process of incorporation and integration into globalized production chains, has an uneven impact on local actors, and changes in the geographies of global production reflect both moments of inclusion *and* exclusion from the commodity chains, often determining conflicting processes of incorporation or expulsion. This contradictory dimension of integration processes has been well highlighted by numerous studies that have focused on the transformation of labour, migration and supply chains in specific areas of intensive agricultural production in different parts of Europe *(*Pedro, Kees, 2024; Avallone, Ramìrez-Melgarejo, 2017, Cortese, Palidda, 2020*).* This process of displacement and integration can take various directions and logics, both locally and within a single commodity chain. It can be horizontal, such as when certain groups of workers are excluded or marginalized from the labour market due to gender or ethnicity. In these cases, the different social statuses attributed to workers play a central role, creating conflicts and tensions among different groups. Alternatively, it can be vertical, as for the pressure exerted by large retailers who implement more

competitive market logics, often leading to the detriment of small farmers. To better understand how the verticalization of agri-food supply chains primarily driven by the globalization and industrialization of production processes, the next section shed lights on the increasing role of global retailers and large distribution organization.

3. Global agri-food supply chain restructuring and verticalization of power

The transformation and the globalization of value chains have shaped the governance forms restructuring relations and the organization of production, distribution, consumption. In this framework, several scholars explored the forms and logics of governance which can emerge from this globalized and interconnected sector. Gary Gereffi (1994) described governance as the process of organizing activities across organizations, with the aim of promoting a certain division of labour along the value chains. As such, to analyze the forms of labour within global value chains, it is central to comprehend how production chains have redetermined the distribution of power and how differentiated concepts of governance can be developed by considering different nodes of the value chain (Riisgaard, Hammer, 2011). Talbot's (2009) findings were based on the assumption that the agri-food sector is predominantly characterized by multiple forms of governance. These forms are evident in the local segments responsible for the harvesting and the initial processing of the product, and in separate segments dedicated to transportation, further processing, and eventual marketing, which are typically located closer to the final consumer. Within the global commodity chain (GCC) framework, governance mostly describes the power relations between actors shaping the flow of tasks and the distribution of costs and profits along the chain. To this extent Gereffi (1994) and Bair (2009) adopted the notion of "*governance as drivenness"* to indicate the power of leading firms in shaping the value chain rules. This approach therefore led to the distinction between producer-driven value chains, where the supply chain is led by those who are in charge of the production process, and are usually supply chains dominated by companies with strong technological power; and buyer-driven value chains where large retailers, brand named merchandisers and trading companies have the leading role and lead with global and transnational networks (Gereffi, Korzenieicz, 1994). Buyer-driven value chains set up decentralized production networks, often located in Southern countries where labour cost is lower, and are characterized by

an externalization of production processes, as power is not created at the production level, but rather at the design, commercialization and distribution phase (Ibid).

Therefore, the restructuring of global agri-food production has also led to a significant change in the structures and dynamics governing distribution channels. The increased financialization of agri-food industry and the integration of labour into world economy, also came together with the rise of new approaches to the functioning of global economy which at first were reflecting the rise and the development of new industries, and therefore the rise of new forms of organizational management. According to McMichael (2018), structural adjustment policies imposed to international organization such as the World Bank (WB) and the International Monetary Fund (IMF) that were demanding the dismantling of protectionist policies in Southern countries' agricultural sectors, have favored the rise of a corporate food regime. This regime is characterized by the dominance of corporate and multinational businesses that requires to look at their increased control played over global production as large firms are simultaneously participating in many different countries, not in an isolated or segmented way (Gereffi, Korzenieicz, 1994). To this extent, studies on global value chains and agri-food scholars, have allowed to understand these rising transformations, and therefore to comprehend how they have gradually led to a global loss of power on the side of producers, while global buyers increased their control role leading to what has been defined a *supermarket revolution* (McMichael, Friedmann, 2007). Burch and Lawrence (2004) have argued that the impact of finance capital paved the way for the entrance of new actors in the agri-food supply chains which started acting like private equity companies, hedging funs and managing the whole supply chain. To this extent supermarkets played a key role and started acting as rentiers considering their capacity to charge for shelf space, to extract payments from suppliers and to demand discounts (Ibid). Van der Ploeg (2010) described the increased role played by large trading companies and supermarket chains as the construction of "food empires" where they increasingly exert a monopolistic power over the entire food supply chains. Indeed, large multinational corporations like Nestlè, Unilever, Monstanto have expanded continuously, controlling large segments of global supply chains and therefore making it almost impossible for farmers to sell food, or for consumers to buy foods outside the circuits they control (Ibid).

Corrado et al. (2018) have read the process of agricultural land intensification in the framework of the increasing need of agribusiness to penetrate the agri-food sector introducing processes of capitalization, commercialization and commodification, therefore favoring new models of

agriculture where production was much more linked to global markets. Over the past decades, investments in digital agricultural and food technologies have increased significantly representing a new business opportunity for large agri-food business actors and investors. These investments are therefore considered profitable investments opportunities and moral obligations for food production to cope with environmental threats and food crisis (Sippel, Dolinga, 2022). The technologization and the digitalization of the agri-food sector has also been favored by institutional initiatives aimed at promoting the digitalization of the rural context such in the case of the EU Green Deal and its F2F Strategy (EU Commission, 2020). The increased interest in investing in these new technologies is linked to farmers' need to apply them before their competitors to obtain their relative advantage. However, this would ultimately result in an increased polarization between farmers and business operators, able to invest in such technologies, and those for which this was economically unviable and therefore questioning the opportunity of improving equity and sustainable practices within agri-food systems (van der Ploeg, 2010). Embedded in the double trends of the increasing financialization and on the greening of the agri-food market, corporate business embraced environmental criticism and integrated sustainable issues within its industrial logic (Friedmann, 2005). As a result, technological entrepreneurialism, digital and green transitions, contributed to the creation of "new agri-food imaginaries" based on financialized practices, theories and instruments that allow to shape the world, its objects, and its organizations (Chiapello, 2020).

In this framework, the global integration of agri-food supply chains resulted in an overall verticalization of production structures, where multinational supermarket chains and retailer started to buy cheap products and services at a global level, with the aim of reducing as much as possible their expenditures and therefore exacerbating competition between farmers within and across countries. This became particularly evident among the two sides of the Mediterranean, as Southern European companies started moving part of their production to Northern African countries, to reduce labour costs and ensure fresh production to supermarket throughout the year (Gertel and Sippel, 2014)[11]. To this extent, private labels – evolving from generic to cheap, low

[11] In 2024, the Italian government launched the Piano Mattei aimed at fostering cooperation between Italy and several African states, including Morocco, Tunisia, Algeria, Egypt, Côte d'Ivoire, Ethiopia, Kenya, the Democratic Republic of Congo, and Mozambique. A primary pillar of this cooperation strategy is the agricultural sector. Central to the Plan are the interests of Italian agricultural enterprises, which include initiatives for agritech projects in partnership with local operators, research centers, and universities to introduce innovative technologies such as precision agriculture and the application of new technologies. While the Plan identifies key agricultural objectives, including promoting

quality, fair trade and sustainable or quality value labels – owned by retailers and supermarkets extended the value proposition to the consumer segment offering premium private labels fully under the control of retailers[12] (Gielens et al., 2021) and therefore turning them into "food business operators" and allowing to reduce governance costs for lead firms in value chains (Vorley, 2007). To this extent, Ponte and Gibbon (2005) developed a conception of governance as based on the creation of private standards and certification instruments under the control of retail and business operators, that were implemented as a form of indirect control based on the definition of security or quality standards (either mandatory or voluntary) that producers, suppliers, subcontractors and workers must follow to join the markets. Finally, among the strategies adopted by multinational corporations and large retailers within globalized agri-food industry, there is the creation of an institutional framework in which standards and certification bodies shaped the distribution of value and of power along the supply chain (Bair, 2017).

The shift in control over the organization and management of the agri-food supply chain has therefore been the control of the retail sector over what is produced, where in what quantities and to what standards. This shift has therefore resulted in a downward pressure exerted by retailers on prices to maximize their profit margins, leading to lower prices paid to producers and potentially contributing to squeezing their margins. In this context, large retailers often source products on a global scale, shifting associated risks and costs to suppliers and increasing competition among farmers that must meet the stringent demands of supermarkets while navigating volatile global market conditions. As Muzlera (2014) highlights, retailers may transfer additional costs to suppliers including the costs associated with quality control, packaging and logistics. This has in turn led to a dual requirement for retailers: they demand both cost efficiencies and lower-price contracts. This scenario is further exacerbated by the deregulation of domestic markets for goods

food security and self-sufficiency in the participating countries, along with enhancing agricultural production, it has faced significant criticism for its alignment with fossil fuel development and a theocratic approach to agriculture (Focsiv, 2024).

[12] Modern day store brands (SB) or private labels (PL) now also popularly called private brands, are brands that are generally owned and marketed by retailers. They have been active on the markets for about 70 years. Over this time span, these brands have evolved from generic, cheap, low-quality economy or budget private labels to lower priced-than-national brands but acceptable-quality value or standard private labels (Gielens et al., 2012). Several researchers studied why private labels penetration varies across products as well as across retailers while Raju et al. (1995) showed that the introduction of private labels is more likely when the product market consists of large number of national brands. As reported in a French survey by LSA/Fournier (1996), the main reasons retailers develop private labels, are to increase customer loyalty, to improve their positioning and margins, and to lower prices. Indeed, retailers usually consider private labels as a way to compete with other retailers and suppliers (Bergés-Sennou et al., 2004).

and services, which has often resulted in the dismantling of governmental agencies and policies previously responsible for regulating agricultural commodity production and pricing (Lattuada, Neiman, 2005). Nevertheless, supermarkets may be limited by contractual agreements with manufacturers and may not have complete control over the retail prices of all products they sell. The tendency of retailers to circumvent producers influence on pricing was recorded by Robinson already in the 1942, leading to the establishment of private labels as a means to enhance profit margins. In some cases, their ability to adjust and influence prices is indeed confined to private labels and store brands and this has over time driven retailers to expand their private label offering to increase their market share (Steiner, 2004). As a result, producers and farmers face reduced incomes, which critically undermines their operational sustainability and increases their debt burdens. This dynamic contributes to the marginalization of smaller producers, who may be pushed out of the market or coerced into less favorable contracts due to their inability to compete with larger agribusiness that hold greater negotiating power.

4. Intermediation, quality turn and the role of standards and private certification within the agri-food industry

With the progressive integration of agri-food supply chains into global markets, the number of intermediary services has increased as the sector has become over time increasingly dominated by value-added activities (Lo Cascio, 2020). The concept of value chains refers to a normative framework that connects small producers to markets through contracts, redistributing the produced value predominantly among large processors, retailers and financial intermediaries (Bair, 2009; McMichael, 2018). Therefore, value capture primarily benefits those at the top of the chain, such as large suppliers and retailers, while excluding farmers and farm workers from these advantages.

In this new system of supply chain organization, intermediation has taken on the alternative character of self-governance of the value chain, alternative to State controls and regulations (Loconto, Busch, 2010). This process has thus enabled large agribusiness corporations to reinforce their leadership by defining and imposing quality and processing standards or price levels, through the supply chain on other actors. These further concentrates control and power within large corporations, excluding small producers unable to meet proposed standards. This mechanism, supported by intergovernmental standards, sometimes bypassed international organizations such as the World Trade Organization (WTO), and that was allowing to create two distinct logics

governing agri-food supply chains differentiating citizens into consumers, among which only some could afford expensive quality standards (Friedmann, 2005).

In this scenario, where large companies in the Global North engage with a vast network of countries in the Global South, predominantly as producers in global agribusiness relations, certifications play a crucial role in streamlining, controlling and managing the supply chain based on defined standards and criteria (Caruso, 2018). These certification systems have gradually been integrated into a regulatory framework addressing social and environmental issues raised by civil society organizations, consumer groups, and social movements. Over time, there has been increasing demand for the incorporation of elements of corporate social responsibility (CSR) within companies. CSR can be defined as the voluntary integration of social and ecological concerns into business operations and stakeholder relations (CEC, 2001). The evolution of quality standards in shaping access to global value chains and industrial trade is closely linked to changes in consumer behaviors which has become increasingly conscious of safety, social and environmental concerns. As a result, quality standards, have proliferated, becoming more specific and facilitating the emergence of economies of scale, new markets, and new processing methods, where certification ensures reliable information to consumers rather than merely the product itself (Ponte, Gibbon, 2005). This process of standardization affects every level of the supply chain: from controlling seed systems to chemical inputs, mechanization, standardization of production processes through economies of scale that have replaced traditional crops sold locally and regionally (Conti, 2018). Analyzing the role of bureaucracy and private regulation in global agri-food supply chains, de Castro Pericacho et al. (2020), revived the concept of *neoliberal bureaucratization* introduced by Hibou (2013) to describe the process of standardization and regulation of production process, which has essentially led to a new rearticulation of public and private power. In this context, the State has begun sharing its regulatory and control functions with various private actors from economic, market, managerial and financial fields, who have taken on the role of regulators, setting standards, procedures, operations that define the for entering the agribusiness market (de Castro Pericacho et al., 2010). The proliferation of these certifications and standards has also reduced profitability margins of supply chain actors by imposing additional and unsustainable costs, particularly for small producers who are further marginalized as large retailers strengthen their positions. To describe this process, Loconto and Busch (2010) introduced the concept of a *Tripartite Standard Regime* (TSR), referring to the gradual proliferation of *Standard*

Development Organization (SDO) and *National Accreditation Bodies* (NAB). This process has led to the emergence of various institutional apparatuses responsible for creating and defining reference standards, accrediting them to companies and certifying their accreditation in different forms and modalities, resulting in a set of institutions where the bodies responsible for regulating their operation are "external" to the whole process of mediation and regulation (Ibid). According to de Castro Pericacho et al. (2020), this new dimension of internality and externality in agri-food supply chains governance, has become the main area of competition and political contention among different supply chain actors in recent years. This dispute can be traced back to the emergence of alternative forms of regulation and certification that seek to counterbalance the power monopoly of dominant certifications within agribusiness logic. In response to the proliferation of private standards promoted by the agribusiness industry, such as Global Good Agricultural Practices (Global GAP) or International Featured Standards (IFS)[13] - which were developed as consortia of enterprises setting standards according to their own interests - alternative standardization processes also emerged. This is the case of Participatory Guarantee Systems (PGS) developed since the 1990s to present alternative solutions to industrial standards and to *reconstruct the local* by promoting territorial re-embedding within agri-food systems from the perspectives of social movements and small-farmers (Farreras, Salvador, 2022). In this respect, Loconto and Busch (2010) argue that "what may appear to be an institutionalization of mistrust in the global market economy, is also a strategy of self-governance that pre-empts state-led regulations of market". Lawrence and Burch (2009), emphasized how studies of the agri-food industry have drawn attention to the ability of food processors to generate rent through brand licensing, payment manipulation and patent use, and how this behavior has greatly increased as national agri-food systems have been transformed into global food systems. However, this evolution has inevitably led to changes in standards and certifications in response to consumer and market demands.

[13] In 1997, the Euro-Retailer Produce Working Group (Eurep) initiated the Eurep-Gap protocol for setting standards, particularly in the fruit and vegetable sector. This protocol has since been adopted on a global scale, with the name changing to GlobalGap in 2007. The Internal Featured Standard (IFS), created in 2003, consists in a control system widespread world-wide, related to quality and security issues that is applied at every level of production, packaging and distribution of food commodities. These certifications may be adopted by individual companies or cooperatives that have established an internal quality system in accordance with the stipulations set forth in the protocol and pertaining to environmental, traceability, product safety, and worker health and safety considerations. Systems for certifying and verifying the alignment of companies or cooperatives with checklists and guidelines often involve self-certification, often through the completion of online questionnaires. According to some (O'Rourke, 2002), this results in a kind of "monitor-to-monitor" that makes real control of the requirements of the certifications themselves almost nonexistent.

Quality standards have assumed a central role in shaping the rules of access to global value chains and international trade. This cannot be fully understood without considering the evolving characteristics of consumption in industrialized economies (Ponte, Gibbon, 2005). Campbell (2009) has highlighted how this post-productivist transition to quality production has resulted in a dichotomy between "*food from nowhere*", referring to industrial production and supermarket standardization, and "*food from somewhere*", which refers to products from specific territories and traditions that respond to the demand of conscious consumers willing to pay additional price for their food. Along with the increased focus on environmental and health elements - which have largely fostered the emergence of regulations and certifications for organic and biodynamic agriculture - attention to the cultural aspects of agribusiness traditions has also grown significantly in recent years. This focus on specific territories and localities that has fostered a restructuring of even the shortest food supply chains (Corrado et al., 2018). As Fonte and Cucco (2015) have stressed, since the 1990s, the gap in the industrialization of agriculture and food has started to be turned into an asset by many actors in the food system. The "Made in Italy" paradigm, for instance, was constructed to ensure quality while blurring the margins of Italian alternative agriculture, thus tracing their evolving relations with the conventional agri-food system.

The increasing market opportunities for high-quality food have therefore contributed attracting farmers and increasing the proliferation of certification bodies that also favored larger retailers to shift to terrain of sustainable and quality production. As Friedmann (2005) stressed, the rising importance of mainstream retailers and food corporations in reinforcing the position of large producers especially in countries such as Latin America, has therefore allowed large business actors to ensure themselves a continuous supply of standardized goods, with important impacts also on inter-state power. As the next section will better explore, new quality requirements and the integration of social and environmental aspects, the standardization of agri-food production and the progressive commodification of food, has contributed to deepen a longstanding process that has disposed and marginalized peasants and agrarian communities, contributing to create more poor consumers without stable incomes (Ibid).

5. The integration of environmental concerns within global agri-food supply chains: the rise of a corporate-environmental food regime

According to Pellizzoni et al. (2024), within the EU governance of food systems, different conceptions and approaches to socio-technical imaginaries play a central role in shaping the directions of policies and strategies for the transition to sustainable food systems. As noted by Jasanoff and Kim (2014:4), socio-technical imaginaries can be defined "as institutionally stabilized, and publicly performed visions of desirable futures animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in technology". Considering the ongoing debates on food sustainability in the EU context, two main socio-technical imaginaries have been identified by Pellizzoni et al. (2024). The first one, led by technological perspective and innovations, is seen as resource to promote a sustainable reorganization of food systems, while allowing for a continuous upsizing of the economy. The second, is based on organic and agroecological perspectives, which are more linked to a holistic understanding of agriculture. However, in terms of its translation into public policies and strategies, the latter is also less coherent than the former and often promotes an ambiguous and vague interpretation of what organic and sustainable agriculture could be. The F2F seems to be mainly influenced by the first imaginary, as it considers food security and food sustainability to be driven by capital-intensive innovations such as digitalization and biotechnologies in a context where market competition remains paramount (Barret, Rose, 2020). Therefore, when considering the commitment and the efforts of the EU institutions and EU members states to achieve a balance and a complementarity between different pathways of sustainability, several elements of tensions must be considered.

The previous sections have illustrated some of the most significant transformations that have affected global agri-food supply chains organization over the last decades. The general industrialization of the sector has coincided with the intensification of production practices, with the rise of large multinational corporations and business operators who have increased their power over the entire supply chains by relying on cheap and flexible labour, mostly represented by migrant workers, and by defining standardized approaches to production, distribution and consumption that favor their consolidation of power. However, these changes also coincided with a growing awareness of environmental and ecological challenges, which started to be integrated at different levels within local, national and international institutions. According to Sandler (1994), there is always an environmental regime that shapes class, production and profit relations according to the way nature is conceptualized, regardless of whether the effects of production on

nature are ignored or considered. This perspective thus enables a reading of the relationship between ecology, the environment and food regimes that is not normative but rather focuses on the emerging contradictions of "green" capitalist production. In 2005, Harriet Friedmann published an article titled "From colonialism to green capitalism: social movements and emergence of food regime", tracing the evolution of food regimes in the last two centuries and the socio-ecological transformations that shaped their evolution. The concept of food regime was first introduced for by Harriet Friedmann in 1987 to historicize global food systems and problematize the linear representations of agricultural modernization. The framework of food regime, developed by Friedmann (1987, 2005) together with Philip McMichael (2009, 2015), allowed scholars of food systems to set the transformations of agri-food supply chains within the broader changes in global political-economy structures, and to conceptualize how key historical contradictions produce crisis, transformations and transition. Food regimes are indeed considered by Friedmann (2005) as "sustained but nonetheless temporary constellations of interests and relationships". The increasing tensions between industrial agri-food production and various forms of local and environmental claims inspired by social and environmental movements, led to the integration of some of these claims within the agri-food industrial production system. Harriet Friedmann (2005) has therefore suggested that "a corporate-environmental food regime is emerging as part of a larger restructuring of capitalism". The scholars' assumption is that while considering the trajectories and transformations taking place in current food regime, it is fundamental to look also at how they interact with other dimensions shaping global food supply chain such as labour, climate change, migration flows and the global markets. As pointed out by McMichael (2009) and Friedmann (2005), this process of analysis must therefore focus on "conceptualizing key historical contradictions in particular food regimes as they produce crisis, transformation and transition" (McMichael, 2009). In 2005, Harriet Friedmann indeed argued that a renovated approach to capitalistic production and a new logic of capital accumulation emerged with the end of the 1980s based on the appropriation and integration of demands from grassroot environmental movements that were claiming for an increased attention towards fair trade, consumer health and animal welfare (Freidman, 2005).

Following Friedmann and McMichael's theoretical approach, the transition to the corporate-environmental food regime should therefore not be seen as separate or parallel to the changes described in the previous paragraphs. On the contrary, looking at how capitalist development in

recent decades has identified a new terrain for wealth accumulation within the framework of environmental sustainability and transition, is useful for understanding how, at the level of policy as well as at the level of supply chain and labour organization, the tendency has been to bring social and political demands ever closer to the interests of a capital, legitimized precisely by a *greener* image. As Friedmann (2005) points out, *green capitalism* cannot really be seen as a contradiction in terms, since it is rather a reproduction of the logics of accumulation and appropriation on a new terrain identified as profitable for the interests of capital. With the rearticulation of consumer preferences and tastes, which are more sensitive to environmental and social issues - thanks also to the central role played by social movements in raising the urgency of responding to certain key issues - new prospects for economic growth have emerged, leading many producers to shift their production towards more sustainable techniques and practices. This has been done in order to respond to this growth. Friedmann (2005) therefore argued that green capitalism could not be considered a contradiction in terms, as it implies a selective appropriation of demands from environmental movements asking to reduce pollution and depletion. The success of this form of capitalism, and the way in which it has shaped food regimes, lies precisely in the fact that it has managed to find some spaces halfway between "conventional" and "alternative" food system, consolidating a new production regime still rooted in industrialized production that has emerged primarily through the appropriation of issues and demands that have emerged primarily from social movements (Ibid). It is therefore worth mentioning some of these areas in which green capitalism has invested in recent decades, to provide some practical examples of how this process of appropriation has social repercussions and conceptualize the role that labor has assumed within this framework. In this section, some examples are given of how the logic of green capitalism has led to a reinterpretation of agriculture in recent decades, starting with a renewed interest in rural development, the protection of territories and local production, and organic farming.

Regarding rural development, authors have highlighted the ongoing tensions between those who view it as a new way to commodify rurality, and those who conceptualize rural development based on horizontal relations, which align more closely with transnational peasant mobilizations opposing the industrialization of agriculture (Lo Cascio, 2022). McMichael (2009), for instance has focused on the role of transnational peasants' movements such as Via Campesina, Fair Trade and Slow Food. He argued that the recognition of the systemic crisis currently experienced by food

systems, including climate change and access and inequality, requires serious consideration. The mobilizations of farmers and social movements which are referring to the concepts of "food sovereignty" and "agroecology", propose addressing the "externalities" of current production systems by overcoming the binary vision of man/nature and placing a systemic approach to agro-food production at the centre (Ibid). Conversely, within the European context, the need to reduce the cost of the CAP has led to a reorientation of European policies towards a requalification and valorization of environmental and rural spaces. In this context, the Agenda 2000, primarily aimed at reforming the CAP, questioned the role of subsidies in supporting EU farmers, and for the first time included a normative reference to the concept of *multifunctionality.* This concept was primarily interpreted as the necessity to encourage, in addition to land cultivation, a new form of rural tourism, as well as a greater environmental protection. Martina Lo Cascio (2022) notes in her analysis of the evolution of the concept of rural development that the primary tension can be attributed to the dichotomy between a productivist and a peasant vision of rural space. In the former case, the promotion and valorization of the environmental, historical and cultural resources of the rural space, occurs in accordance with the principle of multifunctionality. This entails a diversification and multiplication of rural activities, facilitating the exploitation of the countryside as a commodity for city dwellers and therefore enabling the resolution of the problem of price-squeeze (Ibid; Mardsen, Sonnino, 2008). Conversely, the concept of rural development as perceived by farmers is more closely aligned with a holistic vision, encompassing diverse and interrelated dimensions, a multiplicity of actors, and a comprehensive approach to rural space and its interconnection with humans, rather than a reference to public policies (Lo Cascio, 2020). The multifunctional approach, as a strategy for responding to the price-squeeze effects of global supply chains, has therefore proposed that public policies will eventually develop strategies and mechanisms to protect farmers and small producers from being expelled from the agricultural market. From this perspective, the transformation of the rural space into a commodity has coincided over time with the transformations led by the emergence of "green capitalism" and thus with an appropriation of environmentalist and social justice values, to further legitimize the transition towards a production system that is still industrial, but greener. This has become particularly evident with the reinterpretation of standardization processes – already described in the previous paragraphs – that have also begun to concern the most sustainable practices, green and quality certifications, and the call for a production centered on preserving local products,

traditions, and the economic-social relations of territories. This renewed interest in local agri-food heritage, has therefore led to the rise of a diversified body of certifications linked to the valorization of local territories (e.g., Protected Denomination of Origin, PDO, Protected Geographical Indication, PGI), which, however, contribute to reproduce *proprietary* conventions where quality and genuineness attributes are owned by brand manufacturers or processors (Ponte, Gibbon, 2005). Therefore, green capitalism and quality turn imply that while in the past brands were based on family names, contemporary firms refer to different identities linked to differentiation or sophistication (Ibid).

The strong growth of the organic market is probably one of the most evident symptoms of how green capitalism has shaped the evolution of the agri-food industry in recent decades. Concerns about food safety and quality about the effects of industrial farming have inspired the rapid growth – since the early 1970s – of businesses that produce, process, transport, advise and supply inputs certifying organic products. The shift of consumers' tastes has driven industrial producers and business actors to focus on organic production and, over time, certification has become a complex political issue, both among farmers and at various levels of governments (Friedmann, 2005). As a result, organic farming is now widely recognized as a sustainable alternative to conventional agriculture, capable of meeting food and calorie needs, promoting greater protection of soil and water, and responding to the challenge of climate change. Despite this, several studies have highlighted some critical aspects of this approach to agricultural production, criticizing its progressive standardization and integration into an industrial production system that has led to the *conventionalization* of organic farming (Buck et al. 1997; Guntham, 2004). As early as 1997, Buck et al. argued that the explosion of the organic market since the 1980s has been both the cause and the consequence of a gradual transformation of the entry of new actors into the world of organic production (Buck et al. 1997) and, consequently, a transformation of market strategies with a view to restructuring the supply chain and the global organic market.

Organic farming has undergone a significant expansion since its inception in the 1970s, driven by the social movements advocating for an ecological and holistic approach to agrio-food production. Initially, organic farming was based on the principles of promoting human health, environmental protection, and labour. However, over time, it has diverged from its original values, particularly in the European context where a regulatory framework increasingly oriented towards sustainability has emerged. The thesis put forward by Buck, Getz, and Guntham (1997), who have

established themselves as the main proponents of the conventionalization theory of organic agriculture, is that the progressive standardization of practices has favored the gradual entry of large agro-industrial players and a progressive shift away from the values originally underpinning organic agriculture. In their analysis of the progressive industrialization of agricultural processes, Goodman et al. (1987) proposed the concepts of *appropriationism* and *substitutionism*. *Appropriationism* refers to the transformation of agricultural production into specific and segmented industrial activities, while *substitutionism* indicates the increasing proportion of value added to farmers' production that can be replaced by non-agricultural components. The emergence and spread of organic certifications and their respective certifying bodies has brought to the fore a further characteristic element of the corporate food regime discussed in the previous sections. These have emerged as an important regulatory mechanism within the global agri-food system, reflecting the change from public to private governance (Corrado, 2018). As a consequence, numerous authors have, over time, questioned whether organic agriculture represents a significant difference from conventional farming (Buck et al., 1997; Guntham, 2004; Ibid.). Rather than arguing that the *conventionalization* of organic farming has led to a reproduction of the most *salient features* of conventional and industrial agriculture, they have suggested that organic farming has become a modified version of conventional agriculture. In recent decades, the corpus of empirical studies examining the evolving nature of organic agriculture has grown considerably. A growing number of scholars have confirmed the general incorporation of organics into the mainstream of capitalist accumulation (De Wit, Verhoog, 2007; Dantsis et al., 2009). The following section will provide further insights into this debate, demonstrating how organic agriculture has evolved over the past decades from a more radical and holistic approach to a normative and standardized process, contributing to facilitate a significant expansion of the market.

Chapter 2. The spread of organic agriculture: from grassroot movements to EU institutions

Introduction

In 2021, according to the latest FiBL-IFOAM report (2022), global organic agriculture experienced a 1.7% increase in organically farmed land. Nevertheless, organic farming still represents only a modest share of total agricultural land, accounting for just 1,6% of the global cultivated area. In this context, the European Union holds a relatively strong position, with a 10.1% of its agricultural land dedicated to organic farming. Alongside this expansion in cultivated land, the number of organic operators in EU countries has also increased – particularly among those involved in both production and processing. Out of the 442,274 organic farms recorded in Europe, over 378,000 are located within the 27 EU member states, with a significant concentration in Italy, France and Spain. Italy primarily specializes in the production of olive oil and fruit and vegetable crops; France is most active in the bakery sector; and Spain focuses largely on agri-food production. According to SINAB data, approximately 86,000 Italian operators have adopted organic methods of production. While France and Spain lead in terms of the total area of organically farmed land, Italy has highest proportion, with organic farming accounting for 18.2% of its UAA. Production-oriented enterprises make up the vast majority (88%) of Italy's organic operators, totaling around 76,000 business. Among these, 13,500 are involved in both production and processing, while exclusive processors account for just 11% of all operators. As will be discussed in the following chapters, the geographical distribution of organic farming in Italy is notably uneven, with a significant concentration of organic farms in the Southern and island regions. Before examining the reasons behind the widespread adoption of organic practices in Italy in the next chapter, it is important to trace the evolution of the sector, tracing its roots in the demands and claims of social and environmental movements in order to provide the foundation for the subsequent chapters, which will focus on how these principles and values have been incorporated into and transformed by EU strategies and policies for the green transition.

The origins of the organic farming movement can be traced back to the end of the 19th century in Germany, where a countercultural movement advocating natural living and a return to the land emerged as a response to industrial progress. This movement led to the establishment of the

Biologisches Werterzuignis (Organic Quality Product) in 1928, marketing the first organic certification standard. In his essay "La storia del biologico. Una grande avventura", Alberto Berton (2023) outlined the evolution and the origins of organic farming, illustrating its international spread after World War II alongside the increasing industrialization of agriculture and the onset of the Green Revolution. Critiques were primarily aimed at the industrial agriculture practices and the emerging fertilizer industry. Organic food came to be seen as a healthy alternative, not only due to its cultivation from fertile soil, but also because it was produced without pesticides. Therefore, within this branch of agriculture, profits did not favour the chemical industry, as organic farming was no longer relying on products and substances that are harmful to health and the environment, but which are still widely employed in the rest of the agricultural sector. In Italy, the aggregation of the previously fragmented organic movement stemmed from the experience of the magazine Terra Nuova, which gained momentum during the national conference against repression in Bologna in September 1977, supported by numerous European intellectuals. This new approach to agriculture emphasized the intricate connections between soil, human, plant, and animal health. This movement found cohesion with the establishment of the International Federation of Organic Agricultural Movements (IFOAM) in 1972. Berton (2023) argues that the founding of IFOAM marks the end of what he calls the *"*Organic 1.0*"*. He identifies this as the initial phase of organic farming, spearheaded by pioneers, doctors and scientists who were focused on the intrinsic relationship between human and nature in agriculture.

The creation of IFOAM also favored the transition towards the "Organic 2.0", characterized by the regulation and standardization of organic agriculture and farming by both private and public actors As Berton (2023) notes, IFOAM's establishment coincided with the emergence of a genuine organic-based economy, supported by the rapid expansion of the organic market, especially in the United States. Consequently, the term "organic" became increasingly associated with a diverse range of products, including food and non-food items. This complex landscape has brought the IFOAM assembly to prioritize the definition of a label for "organic, ecological and natural agriculture", leading to the definition of a set of common standards which were then disseminated in 1979 (IFOAM, 1979).

The aim of this chapter is to trace the progressive transformation of organic agriculture, not from the perspective of practices, but by considering how growing interest from both consumers and capital in environmental sustainability and health has led to its integration into industrial

agricultural production. Given the classical definition of sustainable development, large-scale promotion of organic agriculture can indeed provide an effective response to crises in ecosystems and biodiversity, significantly contributing to soil fertility improvement and promoting more balanced production. Clearly, the objectives and principles of organic agriculture align seamlessly with the United Nations' Agenda 2030 for sustainable development. Conversely, analyzing the evolution of this sector through the lens of food regime theory (Friedmann, 2005; McMichael, 2018) reveals how the corporate environmental food regime has gained strong legitimacy in the domain of organic agriculture. This chapter examines the processes, contradictions, and various actors (e.g., producers, consumers, and workers) involved in the organic agriculture supply chain and sustainable practices. It highlights how the transformation of this sector has been heavily influenced by the interests of increasingly interconnected global agri-food chains linked to supranational policy frameworks. From this standpoint, it becomes evident that the gradual integration of organic practices into an industrial agricultural chain coincides with increasing regulation by institutions such as the European Union and agricultural policies like the Common Agricultural Policy (CAP).

1. Broadening the concept of organic agriculture

The first definition of organic farming ascribed by IFOAM delineates as a system of agricultural production that fosters and enhances the health of soil ecosystems and people. "Organic agriculture is based on the ecological processes of biodiversity and cyclicity that are adapted to local contexts, rather than on the use of inputs" (IFOAM, 1980). This definition placed primary emphasis on the need to reduce the use of external inputs, while also stressing the need to streamline the supply chain by relying on local resources and actors. Also, it emphasized the importance of maintaining soil fertility and biodiversity to produce healthy, quality food without external chemicals. In the first half of the 1980s, however, the organic market was still quite limited but, in a few years, started growing significantly, especially after the 1986 Chernobyl disaster, which contributed to increase consumers awareness on unpolluted, healthy and wholesome food (Berton, 2023). Consequently, while in 1985, approximately 105,000 hectares were cultivated under organic farming in Europe, currently 15 million hectares are devoted to organic agriculture, representing a significant shift from 0.1% to 8.5% of the total agricultural area (Eurostat, 2020). In Italy, France,

Germany and other central European countries, the organic market started to experience a commercial boom during the second half of the 1980s. This was accompanied by the introduction of organic products by some supermarket chains. Indeed, in the 1980s and 1990s, the organic agri-food market experienced a period of significant expansion, largely driven by growing environmental awareness and by a general increase in consumer demand for healthy and sustainable products. In Italy, the number of organic farms increased from 1,500 to approximately 5,000 between 1985 and 1990. In the United States, the market for organic products grew from a value of approximately $1 billion in the mid-1990s to over $6 billion by the end of the decade (FAO, 2021).

Concurrently, the nascent social movements emerging around organic farming began to question the potential implications of this sudden growth, particularly regarding the integration of organic farming within industrial agriculture. In Italy, following meetings organized by the magazine *AAM Terra Nuova,* several regional coordinations of organic farmers were formed. In 1982, these regional coordinations published a pamphlet entitled *"Che cos'è il biologico?"*[14] (What is organic?), in which it was stated that:

"It is evident that it is of the utmost importance to distinguish between the agricultural products of food distributors who have made a conscious choice, carried out with consistency and honesty, in response to the just demands of the consumer, and those who are only attracted by the possibility of making a profit at the expense of the purchaser's good faith. It is therefore necessary to establish clear guidelines defining the techniques used to produce organic products with superior organoleptic and nutritional characteristics, which are increasingly sought after by an ever-growing number of consumers. The objective of the rules is to prevent consumers from consuming products that are contaminated or of poor quality, and to prevent producers from selling their products at an unfairly low price, which would have a detrimental effect on the entire organic

[14] The booklet *"Che cos'è il biologico"* ("What is Organic") was published in 1982 by the Italian magazine AAM Terra Nuova. AAM stood for Agricoltura, Alimentazione, Medicina (Agriculture, Food, Medicine), three of the main sectors of the chemical industry against which the association's message was directed in order to promote an ecological type of agriculture based on respect for nature and health. In Italy, many authors (Berton, 2023; Canale, 2021) trace the beginnings of the organic movement back to the conference on repression held in Bologna in September 1977. The brochure *"Che cos'è il biologico*" (What is organic?) is therefore one of the fruits of this collective experience, which allowed Italian cooperatives from different regions to define common values and practices related to organic farming. The booklet therefore contains a definition of some of the core values of organic farming and guidelines and techniques for organic soil management (e.g. irrigation, mulching, tillage, fertilization).

sector. At the same time, the rules provide guidance on how to convert to organic farming and offer advice on the practice of organic farming".

The concern about the potential appropriation of certain elements and values of organic agriculture by green capitalism was therefore present within the organic movement even before Harriet Friedmann spoke of green capitalism and the corporate environmental food regime in 1987. In parallel with the expansion and growth of organic farming within global agricultural production, new actors were emerging, showing a diversity of sizes and orientations, and approaches to production. The commercial excesses of Organic 2.0 (Berton, 2023) thus made evident the contradiction between the original aspirations of the organic movement, which sought a radical change in the agri-food system, and the supply to large industries and supermarket chains specializing in the production of certified organic products that were highly processed and packaged with all kinds of packaging. With the rise of organic agriculture fully integrated into the logic of green capitalism, the aspirations of the counterculture movements were absorbed by the expanding agro-industry, and the commercial strategies of global distribution chains led consumers to choose between organic and non-organic in the same way they used to choose between Coke and Pepsi (Patel, 2007). As Matthew Reed pointed out, the strategy of the organic movement began to fail precisely when the environmental and social limits on which their initial claims were based began to take hold within global policies. The emergence of a market-driven approach, where large distribution acted as a regulatory entity over the rest of the supply chain actors through the establishment of the certification mechanism, thus led several small producers to exit the organic market and the certification control system, which were instead considered an economic and bureaucratic burden (Berton, 2023). On this regard, Guntham (2004) emphasized the importance of analyzing the relationship between organic production and the industrial complex in order to understand the sustainability of a supply chain. This analysis should then consider not only the environmental and ecological aspects of organic production, but also the socio-economic aspects of sustainability. Rosin and Campbell (2011) further problematize this clear-cut view of developments within the composition of the companies that are protagonists of the organic expansion. It can be observed that the justifications derived from the market and the industrial world, and their opposition to those of the civic and green world, have characterized the evolution of organic farming. However, it is argued that debates on conventionalization would not

be able to adequately explain the development of the sector more generally, which is rather primarily characterized by a process of continuous negotiation between industrial and alternative food system models and between different actors and logics governing the value chain (Buck et al., 1997; Guntham, 2004).

Furthermore, at the beginning of the 21st century, two main issues have increased the general interest fore organic farming. One was the growing skepticism about the use of genetically modified organisms (GMOs) in agriculture, the other was the increasing criticism around commercial organic farming, considered less consistent with the purer sustainability claims of the original organic philosophies or more with the more recent and holistic conceptions of sustainable food systems (Shreck et al. 2006) On the other hand, as genetic manipulation to create GMOs began to be associated with the world of biotechnology in the 1990s, the agri-food sector began to contrast the term *organic* with the term *biotechnological*, while at the same time associating the prefix *bio* with both sectors. In this context, despite several scientists, such as Giorgio Nebbia (2019), have pointed out the growing confusion around the term "biotechnology", linked to the fact that in reality "all the transformations of living beings, plants and animals carried out by "man" since he has existed are technical or biotechnological operations", following the strong opposition to GMOs by consumers and social movements, public authorities worldwide have only been able to sanction the incompatibility between organic agriculture and GMOs.

The study conducted by the Agriculture Research Group on Sustainability (ARGOS) project, which conducted a longitudinal social-ecological study of over 100 farms and orchards in New Zealand using organic, conventional or an integrated[15] management system, has schematized in the following seven issues, the main claims against organics that were reproduced at the beginning of the 21st century (Campbell et al., 2009):

1. Organic agriculture produces food with no scientifically demonstrable nutritional benefit to consumers.

2. Organic farming experiences significantly declining yields compared to conventional approaches.

[15] Integrated crop management (ICM) aims to balance economic, environmental and social protection and involves different crop management practices and technologies to increase crop yields, reduce environmental damage and sustain crop production (Hussain et al., 2023). Compared to organic agriculture, integrated agriculture is only based on natural fertilizers and provides higher restrictions on the use of pesticides and chemicals.

3. Organic farming represents a flowered agronomic approach that will reduce profitability or lose money outright for farmers who convert to organic approaches.

4. Organic soil management leads to unavoidable long-term declines in soil fertility.

5. Organic systems have unacceptable long-term risks with regard to pest control

6. The "natural" pesticides used in organic systems are just as dangerous as synthetic pesticides.

7. Organic systems provide no wider environmental benefits to agri-ecosystems.

As authors notes (Ibid), most of these critiques have been advanced by media advocates of mainstreaming agriculture, by public supporters of genetically modified technologies. What was emerging at the beginning of the 21st century, however, was the false binarism emerging between organic and conventional agriculture in which each category was idealized and defined in opposition to the other one, while the gap between the two was actually becoming smaller as organic farming was increasing converging towards more industrialized supply chains (Trewavas, 2001; Pollan, 2001). Conventionalization theory would thus provide the necessary elements to observe the different ways in which organic, understood as a label, has been used over time. As Campbell and Le Heron (2007) have stressed, the shift also impacted on the consumption level, with new niches of rich consumers providing a logic for the reconfiguration of agri-food production chains that were supplying the wealthy European markets. Indeed, the heterogeneity that characterizes the organic market and the ability of each actor to modify the approach to organic through certain negotiation processes within supply chains (Rosin and Campbell, 2009) allows for the recognition of potential sites of action through which more sustainable agri-food production and exchange can develop. Therefore, scholars aligned with this conventionalization theory, acknowledged this capacity of actors to influence a given production system by engaging in different dimensions and justifications. In this context, however, there has been little attention paid to the issue of labour and social sustainability within alternative agri-food supply chains or movements (Corrado, 2018; De Castro, 2014). Indeed, a significant proportion of the organic farming movements have ignored the economic and social spillovers, particularly the role of workers within organic production. To this extent, while analyzing the tensions arising around the labour question within California's rapidly expanding organic sector, Getz et al. (2008) have challenged the assumptions that organic agriculture can be associated to more socially sustainable

forms of production, rather arguing that any progress was to be confronted with the incorporation of social justice into agri-food system regulations.

To better provide an overview of the existing literature that has focused on the relationship between organic farming and the dimension of labour within the agri-food sector, the following section resumes the main results of a systemic literature review aimed at analyzing how scholars have conceptualized and analyzed the social and economic implications of organic farming over labour.

2. Working in EU organic agriculture: a systematic literature review[16]

While focusing on organic agriculture's job creation potential, existing literature paid little attention to the specificities of labour conditions in this sector. Therefore, investigating the repercussions of environmentally sustainable standards over social sustainability and working conditions, seems particularly urgent. Recognizing that managing the transition towards fairer and more sustainable food systems requires a comprehensive integration of the social dimensions inherent in agri-food production chains – and therefore also a specific focus on the increasing role of migrant labour within the agri-food sector – it is therefore urgent to underscore the necessity of considering the links between sustainable practices, migration and labour regimes. This study aims to investigate whether the adoption of higher environmental sustainability standards correlates with increased attention to social sustainability and improved working conditions. Recognizing that transitioning to fairer and more sustainable food systems requires integrating social dimensions within agri-food production chains, this research highlights the agricultural sector's labor-intensive nature and its concentration of migrant labor (Corrado et al., 2018). It underscores the necessity of considering the links between sustainable practices and migration and labor regimes. Furthermore, as social dynamics are closely tied to labor and migration, a comprehensive understanding of the complex interplay among social and economic processes related to global value chains is essential (Yap, 2023). Labour regimes are evolving across global production systems (Baglioni et al., 2022), making it important to assess how the intensified focus on

[16] This section presents some of the main results collected in the article published in December 2024 titled "Exploring the nexus between social and environmental sustainability within EU organic agriculture: a systematic literature review", co-authored by myself, Claudia Giordano and Luca Falasconi for the Journal Frontiers for Sustainable Food Systems. The contribution consists in a systematic literature review focused on the academic contributions exploring the impact and the relationship between the organic agriculture and positive (or negative) social outcomes.

ecological matters affects these dynamics, particularly in terms of gender and race. While substantial scholarship has examined the effects of organic agriculture on natural resources (Kanianska, 2016; Tilman, 1999) and worker conditions (Castracani et al., 2021; Lo Cascio and Perrotta, 2022; Piro, 2021; Piro and Sanò, 2018), there remains a significant gap regarding the intersection of sustainable agri-food supply chains and labor standards.

Based on the systematic review conducted by Magnano et al. (2024)[17] this section aims at addressing this gap by elucidating the implications of the green transition and environmental standards on farmers and farmworkers in the organic sector. The final body of literature considered within the article, consists of a total of 41 contributions that were selected in line with the research objective and were therefore analyzed and grouped through the lens of three main themes, representing the intersection of working conditions and the sustainability of agricultural production. The first theme encompasses contributions that analyze the overarching regulatory framework governing EU organic production. This framework outlines the specific relationships among value chain actors, primarily shaped by organic certification schemes and subsidies for organic production as dictated by EU policies. The second theme delves into the critical role of organic producers and farmers, examining how the priorities and values of these stakeholders may influence the transition to organic production, subsequently affecting the relationships they maintain with their employees. The third theme focuses on the labor conditions experienced by workers and agricultural laborers within the realm of organic agriculture. Although only a limited number of the selected contributions explicitly address labor conditions within sustainable supply chains, this analytical framework is essential for providing a comprehensive overview of the dynamics and factors shaping the structures and relationships within the organic agri-food value chain.

2.1. Regulatory framework for organic production

[17] The review was conducted in accordance with the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) protocol (Moher et al., 2009). The initial stage of the review process involved identifying peer-reviewed scientific articles and book chapters published between 2000 and 2023, chosen to reflect the growing focus on organic and sustainable agricultural practices that emerged in the late 1990s, particularly after reforms to the second pillar of the CAP (Lillemets et al., 2022). This approach included an exploratory phase analyzing literature on the interaction between labor regimes and conventional agriculture, followed by studies examining the organic market's development. Research was then conducted from September 2022 to February 2023 using the Scopus database. This method allowed for the identification of relevant keywords aligned with the research scope. The keywords were then searched within the title, abstract, and keywords of the Scopus database, employing the operator "AND" to ensure all documents referenced the organic sector. Subsequently, material was collected, eligibility criteria were defined and a descriptive and critical content analysis was performed.

The regulatory framework for the organic farming within the EU places significant emphasis on organic certification schemes. EU institutions have actively promoted the establishment of standards and regulations to govern and advance the interests of the EU organic market, engaging with private entities involved in the certification system. Sansavini (2006) noted that, alongside organic certification, the introduction of specialized quality labels (e.g., PGI, DPO) has contributed to the emergence of a "certification regime*",* which has facilitated the proliferation of private certification bodies. However, this expansion has led to dissatisfaction among producers regarding the extensive regulations imposed by these systems. A survey conducted by Zagata (2010), revealed that several farmers expressed frustration, claiming that the "European farmer is the last free creature on earth". Kröger and Schäfer (2014) contended that the absence of clear EU regulations has resulted in a lack of transparency regarding the environmental and ecological requirements of organic agriculture, thus fostering the proliferation of third-party certification systems. On this regard, Dias et al. (2021) emphasized the importance of eco-regions[18], in enhancing a better the understanding of the connection between environmental and socio-economic dimensions of organic agriculture. However, the adoption of differentiated production models has increased overall production costs. To this extent, Aubert and Enjolras (2017) observed that farmers engaged in diverse commodity production are often reluctant to pursue organic farming certification. Such certification is indeed more frequently adopted by either large, well-equipped farms, or smaller farms with minimal levels of diversification. Therefore, this shift has prompted many organic farmers to disengage from the evolving guidelines (Zagata, 2010). Jouzi et al. (2016) distinguished between farmers in Western countries – predominantly certified as organic and able to command premium prices – and non-certified producers often located in Southern countries, relying on direct sales within local markets. This differentiation is exacerbated by escalating input costs associated with organic farming, including those for export and

[18] In the context of EU regulations pertaining organic agriculture, eco-regions, also known as bio-regions, refer to geographic areas defined by natural boundaries rather than political ones, encompassing distinct ecological and environmental characteristics. These regions aim to promote sustainable agricultural practices that align with the unique environmental conditions and biodiversity of each area. The CAP is the primary regulatory framework for eco-regions. Under the CAP Rural Development Programs (RDPs) provide funding and support for sustainable rural development projects, including those that focus on organic farming and environmental conservations within eco-regions. Moreover, as part of the CAP reform, each EU Member State is required to develop a Strategic Plan that must address specific environmental and climate-related objectives, including those that pertain to eco-regions. Beside the EU CAP, the EU Biodiversity Strategy for 2030, the F2F Strategy and the EU Organic Regulation (EU 2018/848) support eco-regions by promoting high standards of environmental protection and biodiversity conservation in organic farming practices.

certification. Many small-scale farmers in the EU find themselves excluded from the primary retail markets, leading them to seek alternatives such as Participatory Guarantee Systems (PGSs), which enable them to build alternative networks and organizations operating outside the conventional agri-food industry.

As the EU CAP represents the primary framework for public support of organic farming, several contributions have also focused on how it contributes to influence the social outcomes of the expansion of this sector. Konstantinidis (2016) and Lecole (2021) found that larger farms disproportionately benefit from EU subsidies, diverging from policymakers' initial expectations. Conversely, Di Vita et al. (2018) argued that EU support schemes for organic farmers allow them to sell their products at higher prices. Nevertheless, EU agricultural policies tend to assess a region's success in promoting sustainable agricultural practices based on the share of land dedicated to organic farming in its utilized agricultural area, presuming that socio-economic benefits automatically arise from the growth of organic farming (Kozàkova et al., 2014; Konstantinidis, 2016).

Kröger and Schäfer (2014) comparative analysis of various EU regulations concerning organic farming confirmed that limited attention to the social aspects of farming sustainability. Other scholars (Lundqvist, 2000; Renner et al., 2008) emphasized instead the need of defining organic policies and frameworks for the green transition of the agricultural sector that also focus on working conditions. Additionally, the issue of geographical heterogeneity also emerged in the literature pertaining to the EU context, particularly among those who advocating for increased instruments and investments schemes to support the transition to organic agriculture in Eastern European countries (Raakauskene et al., 2015; Bradut et al., 2017; Berbec et al. 2018). Florea et al., (2021) provided recommendations for how organic agriculture could play a pivotal role within the Romanian agricultural sector, accentuating its potential contributions to the green transition and sustainable development. Bradut et al. (2017) argued that organic agriculture could help mitigate excessive land fragmentation, the predominance of subsistence and semi-subsistence farming, and the precarious state of rural infrastructure, all of which negatively affect labor markets and contribute to migration flows towards Western and Central European countries.

2.2. Organic producers and farmers.

The second theme identified in the literature review pertains to the role of organic producers and farmers, whose influence has significantly increased over recent decades. This growth has notably impacted the initial approach to organic and sustainable agriculture. Firstly, there has been an increase in the profitability of organic farming, leading to higher margins compared to conventional agriculture (Pissioner et al., 2017). This rise in profitability has resulted in greater satisfaction among organic farmers due to their enhanced earnings (Bouttes et al., 2020). Ferasso et al. (2021) found that organic producers in Italy and Portugal achieved premium prices for their products, resulting in a 22% increase in profits. Other studies, such as Pergola et al. (2013), have reported lower production costs in organic farming, while Mattila et al. (2020) highlighted the positive impact of increased profits on workers' wages, particularly in the organic milk production sector, where salaries can even triple. Secondly, the premium pricing for organic products—estimated to be 29%-32% higher than their conventional counterparts (Jouzi et al., 2016)—plays a crucial role in the organic market. This pricing mechanism helps mitigate uncertainties and ensures a fair allocation of value across the production chain (Kröger and Schäfer, 2014). However, it is essential to note that final commodity prices in industrial agriculture, whether organic or conventional, are primarily determined by larger retailers and wholesalers. The integration of conventional market dynamics into the organic sector often results in a trade-off between economic and environmental considerations, prioritizing economic efficiency over social and ecological factors (Dumont and Baret, 2017). Employment conditions on organic farms remain a significant concern regarding economic efficiency (Ulman et al., 2021). Additionally, organic producers face higher input costs, with some reports indicating an 11.7% increase (Ferasso et al., 2021) and an even greater increase of up to 33% in comparison to conventional agriculture (Lončarić, 2014). Despite the ban on pesticides and fertilizers—which reduces energy-intensive inputs and enhances self-sufficiency (Siddique et al., 2014)—organic farming often results in lower yields. Research shows that organic yields typically amount to 80% of those of conventional farms (Kozáková et al., 2014), and in developing nations, this figure may drop to 43% (Di Vita et al., 2018; Shubbha et al., 2021), raising concerns about food security.

Another important factor influencing farmers' approaches to organic agriculture is the growing awareness of its environmental impacts. Mattila et al. (2020) underscore farmers' interest in promoting human health, safety, and biodiversity, while Dumont and Baret (2017) highlight a shift towards agroecological principles that value the interconnections among ecological, social, and

environmental aspects. This holistic perspective encourages farmers to exceed basic organic certification requirements through stricter interpretations of environmental and health standards (Brigance et al., 2018). While benefits include reduced exposure to harmful substances, the more labor-intensive tasks associated with organic farming may increase exposure to adverse weather conditions and dust, adversely affecting workers' health (Lončarić et al., 2008). Regarding the social dimension of organic farming, Jetvic et al. (2020) point out the importance of relational aspects, such as networks and community support, in helping farmers adopt best practices and respond to pressing market challenges (Siddique et al., 2014). This relational dimension is particularly emphasized in alternative food networks (Brigance et al., 2018; Bouttes et al., 2020), fostering a supportive environment that facilitates the transition to organic farming. Bourgeois et al. (2014) argue that social networks can attract young farmers, who may lack traditional knowledge, positively impacting their mental well-being. Furthermore, Bouttes et al. (2020) found that engagement with farmer networks enhances security and control over agricultural practices.
A detailed exploration of the roles of organic producers and farmers underscores the complex interplay among economic, environmental, and social factors within the organic agriculture sector. This complexity highlights the necessity for better integration and coordination among governmental and local authorities to support the transition to organic farming (Maas et al., 2020). Financial support remains critical for disseminating the added value of organic agriculture (Zagata, 2010), and Medland (2016) emphasizes the importance of relational networks in resisting pressures from larger supply chain actors, allowing small farmers to uphold their principles and values. However, Sbicca (2015) notes that labor exploitation and working conditions are often inadequately incorporated into the aspirational ideals of many organic farmers.

2.3. Farmworkers and employees

The literature primarily investigates the interrelationship between work and organic farming, emphasizing the associated health benefits and improvements in well-being. Scholars such as Maas et al. (2020) and Mołocznik (2004) have examined the reduced health risks resulting from the elimination of agrochemicals and pesticides, which concurrently lowers exposure to toxic substances and enhances safety for workers. Mołocznik (2004) acknowledges that agriculture inherently presents risks stemming from continuous exposure to dust, noise, vibrations, chemicals,

and biological agents. Mitloehner and Calvo (2008) further highlight the incidence of both fatal and non-fatal injuries linked to machinery use and animal feeding operations in organic agriculture.

In a comparative analysis of labor conditions across various agricultural approaches—namely agroecological, organic, and conventional practices—Dumont and Baret (2017) conclude that workers engaged in agroecological and organic farming report higher levels of satisfaction, primarily attributable to reduced exposure to harmful pesticides. These findings align with Medland's (2016) research on organic agricultural enclaves in Spain, which indicates a preference among workers for organic farming due to health and safety considerations. Additionally, positive outcomes on workers' perceptions are often associated with improvements in mental health; Brigance et al. (2018) found several psychological benefits linked to workers' commitment to organic farming, resulting in a greater overall level of personal satisfaction. However, increased workload is another aspect that scholars (Lundqvist, 2000; Berbeć et al., 2018) have emphasized when exploring the social implications of sustainable agriculture. They note that this increased workload often corresponds with an expansion of job opportunities within organic agriculture (Hilal et al., 2021). Lundqvist (2000) and Berbeć et al. (2018) highlight the connection between organic farming and increased physical tasks, which can lead to health issues and time-consuming practices. Hilal et al. (2021) estimate that organic and food quality production requires approximately 13% more labor than conventional methods, potentially generating additional employment opportunities. However, this increase in employment is frequently limited to part-time contracts, as noted by Lobley et al. (2009), which tends to create a reliance on temporary migrant workers, further complicating local economic development.

Another transformation resulting from the shift to organic farming is the reliance on a higher degree of specialization and advanced technological infrastructure required to comply with organic certification guidelines. This trend encourages the upskilling of local communities (Hilal et al., 2021; Siddique et al., 2014). Furthermore, a survey conducted by Briz et al. (2020) examining the employment market in the EU organic agricultural sector revealed a clear willingness among farmers to hire graduates specializing in organic agriculture and related fields, with practical skills in teamwork and problem-solving being particularly sought after. Consequently, several authors (Konstantinidis, 2016; Jouzi et al., 2017) assert that organic farming is characterized by knowledge-intensive activities necessitating continual experimentation. Despite contributions by

Lundqvist (2000) and Lecole (2021) that underline the ongoing prominence of family farming within the agricultural sector, it is evident that large agribusiness companies are increasingly assuming a dominant role within agri-food value chains. The changing structure and size of farms have altered the composition of the labor force and increased the need for flexibility, which traditionally was provided by family members. As business activities expand, reliance on paid labor—often sourced through subcontracting, cooperatives, or employer groups—has grown, enhancing labor flexibility (David et al., 2010). However, many articles included in this study neglect to investigate the relationship between organic farming and paid labor in terms of wages and contracts. One of the early contributions advocating for a deeper understanding of social sustainability concerning labor processes in the organic sector was made by Jansen (2000), who emphasized the interplay of gender roles, social differences, and social reproduction. Nevertheless, among the contributions examined for this study, few provide a thorough analysis of organic farming's impact on wage and income levels for farmworkers. An empirical study by Berbeć et al. (2018), which compared the performance of ten organic and ten conventional farms in Poland, found no significant differences in wages or income. Moreover, the study revealed that both farmers and workers generally expressed dissatisfaction with both farming systems.

In contrast, Hilal et al. (2021) investigated the effects of food quality schemes, including geographical indications and organic production, on the social and economic sustainability of farmers and regions. Their findings indicated that within such schemes, wage levels could be higher by up to 32% due to elevated prices for organic products. The authors argue that processing levels are the most lucrative, requiring a more specialized labor force (Ibid). Research by Renner et al. (2008) emphasizes the importance of focusing on wage dynamics and suggests that future research should prioritize examining working conditions in sustainable sectors. According to these authors, such an approach would facilitate the development of recommendations aimed at ensuring a fair green transition that guarantees dignity, safety at the workplace, and adequate remuneration.

The concept of "internal fairness," developed by Kröger and Schäfer (2014), highlights the significance of minimum wage standards in establishing social minimums for workers. They distinguish between "internal fairness," which pertains to conditions and relationships among workers and employers within a specific organization, and "external fairness," which refers to relationships among different actors in a value chain. Their research indicates that none of the

farms included in their empirical study had established minimum wage or working standards, despite their commitment to providing regular training for employees (Ibid).

Consequently, as various contributions suggest (Medland, 2016; Jansen, 2000; Hilal et al., 2021), organic agriculture may not significantly alter existing employment relations and working conditions from the perspective of workers. The empirical research conducted by Medland (2016) on the organic enclaves of El Ejido in southern Spain revealed that the vast majority of farmworkers interviewed expressed a preference for organic farming primarily due to health benefits, with little to no differences observed in wages or job tasks. In contrast, the study by Maas et al. (2020) indicated a greater level of job satisfaction among workers on organic farms, which was largely associated with enhanced cohesion and more sustainable labor practices. This exploration of organic farming's effects on workers underscores the complex interplay of economic, environmental, and social factors within the sector. It highlights the necessity for comprehensive policies and supportive frameworks to address the challenges faced by workers in the transition to organic agriculture, ensuring that the benefits of this shift extend beyond mere economic gains to foster improved working conditions and social sustainability.

2.4. Evalutating the social impacts of organic farming on labour dynamics

Having analyzed the transformations faced by the agricultural systems with the rise of agri-business and the function of EU certification regimes and subsidies, the previous sections also stress the increasing proliferation of third-party certifying bodies which are frequently established by major supermarket chains investing considerable resources in the organic market. These transformations have coincided with the industrialization of the entire agricultural sector, resulting in the gradual linearization of organic production as it becomes integrated into the agri-food industry. This process of conventionalization represents not only a progressive departure from the original values of organic farming, but also a progression of capital to the terrain of sustainability. The emergence of third-party certifications, particularly in the EU, has bolstered the power of agribusiness companies and private entities, resulting in a divergence from initial organic principles. This change has created a clear distinction between advocates of proximity agriculture, environmental conservation, and short supply chains, and those who perceive organic production primarily as an investment opportunity. The introduction of certification systems, extending

beyond organic farming to include geographical indications and quality labels, has further reduced the number of small producers capable of meeting certification requirements, thereby exacerbating existing inequities within the market. Despite these challenges, there remains a notable gap in the literature concerning the nexus between organic production and working conditions. While much of the existing research has focused on the role of small-scale farmers or large agribusiness actors, studies examining alternative and community networks, such as Participatory Guarantee Systems (PGS), often overlook the labor dimension and the implications of transitioning to environmentally sustainable practices for workers[19]. Nonetheless, the International Federation of Organic Agriculture Movements (IFOAM) emphasizes the principle of "fairness" as integral to organic agriculture, which encompasses social justice and rights.

Although the original intent of the organic movement was to adopt a holistic approach encompassing environmental, economic, and social sustainability, the sector continues to prioritize farmers' interests, often neglecting the impacts on working conditions. Furthermore, various stakeholders within the organic production chain, including certification bodies and large retailers, demonstrate limited commitment to improving labor conditions within their operational strategies. Scholars have explored how major retailers have amplified their influence through institutional frameworks such as third-party certification systems, thereby reinforcing connections between public and private forms of regulation (de Castro et al., 2021; Loconto and Busch, 2010). The findings presented in this section contribute to a deeper understanding of how the gradual integration of organic principles into industrial production has diminished the transformative potential of organic agriculture, aligning it more closely with conventional and intensive agricultural practices. This alignment also facilitates the integration of organic principles into what Friedmannn (2005) refers to as "green capitalism," reflecting the increasing role of private actors and standards supported by governmental authorities and intergovernmental entities in transforming agri-food supply chains in response to social movements and consumer pressures.

[19] The essence of the PGS models for organic certification lies in the involvement of a wide range of stakeholders (e.g., smallholders, small processors, agricultural technicians, NGOs, supporting associations, academic and consumers) sharing the responsibility for the proper functioning of the initiative and being inspired and driven by a common vision of social justice, respect of natural resources, food democracy and sovereignty and workers' rights (Sacchi et al. 2024; Sacchi 2012). Alternative approaches like PGS have emerged as potential solutions to address the obstacles and costs faced by small-scale farmers and offer a more inclusive and participatory approach to organic certification, wherein farmers collectively ensure the quality of their products through peer review and consumer engagement (Ibid). Within this context, international organizations such as IFOAM and FAO have recognized the importance of supporting associations implementing PGS at a global level

The contribution from Magnano et al. (2024) advocates for an analytical perspective that enables a thorough examination of labor processes within the organic agri-food supply chain at various stages. Such an approach will foster a comprehensive understanding of the relationship between the restructuring of organic agriculture and the concurrent transformation of labor dynamics in the sector. Further research should assess the intermediary role of certification schemes and their varying impacts on producers based on farm size, particularly with regard to working conditions and the ability of employers to ensure fair wages and safe environments for their employees. Contributions from authors who focus on the experiences of farmworkers (Barrientos et al., 2011; Gereffi et al., 2016) would enhance understanding of workers' agency and the unique challenges facing both native and migrant populations.

This research underscores the essential need for policies that delineate explicit strategies for transitioning toward more sustainable food systems, with a particular emphasis on addressing social dimensions related to labor conditions. As Leonardi (2023) observes, reaffirming a strategy that integrates economic growth and environmental sustainability while leveraging the social dimension of this relationship could enhance the political and social representation of labor. Given the increasing significance of the organic market—central to EU institutions' green transition—there is a pressing need to investigate the potential benefits this sector offers to workers, taking into account the diversity within this field and the various interpretations of organic principles. Moreover, recognizing agriculture's dependence on a non-local workforce (Corrado et al., 2018), there is an urgent demand for the literature to intensify its exploration of how the international division of labor impacts sustainable and green practices. While most contributions focus on policy analysis and the social implications of organic agriculture broadly, future research must consider the specific characteristics of the agricultural sector, which heavily relies on migrant workers who are often fragmented by migration policies and labor market restrictions (Anderson, 2010). Additionally, studies examining labor market impacts frequently overlook the agency and mobility of migrant workers, who constitute a significant portion of the workforce in the EU agricultural sector. It is crucial to explore how the ecological transition within the agri-food sector intersects with the realities faced by a racially diverse and stratified labor force.

Future research should thus focus on examining the extent to which the organic agriculture industry continues to rely on a flexible, low-cost workforce, predominantly composed of migrant labor (Gertel and Sippel, 2014). Given the ongoing expansion of organic agriculture within the EU

context, there is an urgent need for empirical studies that evaluate the impact of organic farming practices on working conditions and overall labor dynamics. Such contributions would enhance the understanding of the complex relationship between social and environmental sustainability in agriculture and elucidate how these changes may affect various labor regimes and worker experiences. In conclusion, the challenges and opportunities presented by the growth of organic agriculture necessitate a broader examination of its implications for labor standards and the well-being of workers. By addressing the social dimensions of organic farming, future research can provide valuable insights for developing policies that ensure equitable and sustainable practices in the agricultural sector, ultimately contributing to a more just transition for all involved.

3. Organic agriculture within the EU framework and the evolution of EU Common Agricultural Policy

The expansion of organic farming in the European Union has been significantly influenced by a combination of increasing consumer demand for organic products, heightened environmental awareness, and the growing interests of green capitalism. The integration of organic agriculture within the framework of the CAP reflects EU's commitment to sustainability and environmental protection. Alongside the Biodiversity Strategy[20] which was released simultaneously in 2020, the F2F Strategy outlines future directions for the CAP, including the incorporation of more robust environmental measures into agricultural policy. This strategy plays a crucial role in shaping the CAP due to its ambitious and specific transition goals, which are set to be achieved in 2030. Under this framework, the Commission proposed to reduce the overall use of chemical pesticides by 50%, ensuring that 25% of the agricultural land is farmed organically, significantly increasing organic

[20] The EU Biodiversity Strategy is part of the EU Green Deal and aims to protect biodiversity and to restore Europe's natural habitats and ecosystems. It involves ambitious targets to be addressed by 2030, such as the protection of at least 30% of the EU's land and marine areas, the restore of degraded ecosystems and the reduced use of chemical pesticides by 50% and fertilizer use by at least 20%. Scientific contributions adopting a food regime perspective have scrutinized various aspects of the formulation, implementation and potential impacts of the Biodiversity Strategy, stressing how policy ambiguities often result in significant discrepancies between policy goals, actual implementation and potential impact. Critical analysis has indeed pointed out that economic interests, can hinder the adoption of biodiversity-friendly practices, stressing a certain skepticism about whether sufficient funding and political will exists to achieve the strategy objectives and arguing that the strategy indeed lacks coherence with other EU policies. In particular David Harvey (2014) suggests that strategies like the EU Biodiversity Strategy may not go far enough in addressing the root economic causes of biodiversity loss while Barca (2014) and Kremen (2012) have focused on the need to promote more biodiversity through agroecological practices stressing that the Biodiversity Strategy does not focus enough on promoting diversified farming systems and for lacking strong incentives for farmers to adapt biodiversity-friendly practices.

aquaculture, reduce nutrient losses, stop land deterioration in soil fertility, and restore at least 10% of agricultural area to high-diversity landscapes (EU Commission, 2020).

Over the years, the EU has indeed applied a variety of environmental policy instruments within the CAP. However, authors like Feindt (2010) have noted that environmental concerns were not the main drivers behind the introduction of these measures, as their actual purpose was rather to legitimize income support for farmers. Central to this integration is the recognition of organic farming as a pivotal component in achieving environmental diversification and sustainable development - a perspective that gained momentum following the Brundtland Report in 1987, which underscored the emphasized the importance of environmental issues on the international agenda. A cornerstone of the EU's commitment to organic farming was the establishment of Regulation 2092/91, which set the foundation for member states to develop their own organic standards and control procedures. This regulation, effective from 1993, laid the groundwork for defining and safeguarding organic farming practices across the EU. It provided an initial framework for the growth of organic agriculture by ensuring the protection of consumers and producers, as well as the provision of EU incentives, thereby promoting a balanced development of the organic market. The development of organic farming policies has been significantly supported by EU incentives, which have encouraged the expansion of organic farming both in terms of area and considering the number of operators. These incentives have also facilitated the expansion of organic product availability, contributing to the establishment of various distribution projects and enhancing market stability (Berton, 2023)[21]. The CAP, which has played a central role in agricultural subsidies since the 1990s, has in fact provided complex and sometimes contradictory frameworks for incentives and direct investments that have shaped the agricultural landscape, including organic farming (e.g., production premiums and extensification programs at the same time) (Schmidt et al., 2007).

[21] In Italy, the Istituto Italiano di Reforming, which later became NaturaSì, was founded in Verona in 1992 with the aim of creating a network of organic supermarkets. The business idea was to create a network of franchised supermarkets that were more modern than the shops of the 1970s and 1980s. At the same time, a number of organic farm shops began to proliferate, and the number of specialized and independent shops began to create a distribution platform for organic products. At the same time, the first consumer groups motivated by ethical concerns began to spread, leading to the creation of the first buying groups in the 1990s. The growth and development of new forms of specialized distribution of organic products also affected other European countries, and by the 1990s more than a third of the European market was retail, unable to meet the growing demand from consumers choosing organic products.

The MacSharry reform[22] of the CAP, implemented in 1994, initiated a paradigm shift in agricultural support by moving towards a *decoupling* approach which provides public support and direct payments to farmers without directly influencing production levels (Sotte, 2023). Additionally, the reform introduced measures to support environmentally sustainable practices, establishing compensation payments per hectare rather than based on production volume. This shift aimed at discouraging intensive livestock farming and at promoting less polluting agricultural practices (Daugbjerg, 2011). In response to the concerns raised by the agricultural representatives of COPA-COGECA[23], the decoupling objective, as originally outlined in the reform text, was effectively eliminated in its final version (Sotte, 2023). Except for compensatory payments tied to the regional average yield, farmers continued to receive public support based on their production volumes. This mechanism favored large farms, contributing to the increasing polarization between small and large agricultural enterprises, a trend not mitigated even when decoupling funding was approved in subsequent CAP reforms. Nevertheless, environmental concerns remained a pivotal aspect of the reform, with farmers being acknowledged as "*stewards of the landscape and the environment, as well as on their essential contribution to a vibrant rural society*" (Moehler, 2008). The reform also included the definition of Regulation 2078/1992 aimed at promoting

[22] The MacSharry Reform of the CAP, named after the European Commissioner for Agriculture Ray MacSharry, sought to address various criticisms of the CAP, including concerns about overproduction, high costs, and environmental impacts. The reform occurred within a broader political context that encompassed numerous factors and pressures, commencing with the global trade negotiations conducted within the framework of the General Agreement on Tariffs and Trade (GATT). At this time, the European Community (EC) was instrumental in advocating for a reduction of agricultural subsidies and support, in order to align with the emerging international trade norms that sought to mitigate trade distortions. From the perspective of the EC, the CAP was becoming increasingly costly, absorbing a significant portion of the EC budget. Moreover, there was a growing concern among member states about the sustainability of funding such high levels of agricultural support, particularly in light of the need for fiscal discipline and the emergence of new priorities in other policy areas. In this context, the MacSharry Reform was a response to these multifaceted pressures, aiming to make European agriculture more market-oriented, financially sustainable, and environmentally friendly. For extensive research on the impacts and effects of the MacSharry Reform within the EU CAP and EU agricultural market consider the contributions from Alan Matthews (1993), Harvey (1997) and Hill (2012).

[23] COPA-COGECA is a major representative organization for European farmers and agri-cooperatives. It consists of two entities: COPA (Committee of Professional Agricultural Organizations) and COGECA (General Confederation of Agricultural Cooperatives in the European Union). The organization primarily engages with EU institutions, including the EU Commission, the EU Parliament and the Council of the European Union, to influence agricultural policy and contribute to the development of agricultural policy by providing expert analysis and recommendations. COPA-COGECA has also been actively involved in discussions around the EU Green Deal and F2F Strategy, calling for a support to innovation and for the need to encourage the adoption of technologies and practices that can help farmers to promote sustainable methods while maintaining productivity and profitability. Therefore, they have lobbyed for increased funding and support for research and development in sustainable agriculture. Within the most recent protests of EU farmers, COPA-COGECA has also played a significant role criticizing some aspects of the EU F2F Strategy and stressing how its implementation must not compromise farmer's income or competitiveness.

environmentally compatible production methods, reducing the use of chemical fertilizers and pesticides, and at encouraging more sustainable farming practices (EU Commission, 1992). Following the introduction of the first EU regulation for organic farming in 1992, the MacSharry reform laid the groundwork for a unified framework supporting the transition and maintenance of agriculture throughout the EU. This reform underscored the centrality of direct payments, particularly within the context of agri-environmental measures and rural development (Lampkin, Sanders, 2022).

The subsequent Agenda 2000, developed by the EU in response to the future challenges posed by the enlargement, placed agriculture at the core of EU policymaking. This agenda advocated for a European model of agriculture prioritizing environmental protection, not only regarding goods and services produced by farmers, but also for the collective benefit of society (EU Commission, 2000). As such, the Agenda 2000 established a European model of agriculture based on policies aimed at preserving environment and landscape, at supporting rural communities and at promoting a diverse and multifunctional agriculture (EU Commission, 2000). It reinforced the importance of policies that go beyond simply supporting farmers and producers, focusing instead on the broader objectives of environmental sustainability and rural development. These policies have been instrumental in shaping a European agricultural model that balances production with the need to protect and enhance the natural environment (Sotte, 2023).

In the CAP periods 2007-2013 and 2014-2020, the integration of organic farming was further strengthened and the 2007-2013 CAP included specific measures for organic agriculture dedicated to rural development, to the promotion of organic farming in its role of promoting sustainability and environmental diversification. Moreover, updated regulations were introduced to ensure compliance with EU norms, with stricter and more precise guidelines for organic product labeling, including the mandatory use of the European organic logo, which helped standardize and enhanced consumer trust in organic products across the EU (Lampkin, Sanders; 2022). The CAP 2014-2020 was aligned with the Europe 2020 strategy, aimed to support a smart, sustainable and inclusive growth model for the EU, particularly in the aftermath of the economic and financial crisis. The mission of the CAP during this period was to contribute to the development of a more localized, environmentally balanced, climate-friendly, resilient, competitive and innovative agricultural sector within the Union (EU Commission, 2010). As part of this mission, the reform introduced a new “green” climate and environmental payment, known as *greening*. This payment represented

a significant shift towards a greater focus on environmental issues, incentivizing practices such as crop diversification, the maintenance of permanent grassland, and the establishment of ecological focus areas to support carbon sequestration and biodiversity. The inclusion of *greening* payments in the CAP 2014-2020 was a response to growing pressures for a more environmentally friendly CAP and were designed to ensure that direct payments to farmers were linked to sustainable farming practices, thus aligning agricultural subsidies with broader environmental goals (Lampkin, 2023). The reform also introduced measures to support carbon sequestration and enhance biodiversity, reflecting EU's commitment to advancing organic farming as a key component of its agricultural and environmental policies. However, greening payments made little differences in motivating farmers to introduce more environmentally friendly farm practices (Alons, 2017), and even the European Court of Auditors (2017) concluded that greening was "unlikely to significantly enhance the CAP's environmental and climate performance" and "greening remains, essentially, an income support measure".

The latest regulation on organic farming (Regulation 2018/848) introduces also a principle of conformity to EU standards for organic products, including those from non-EU countries. In most third countries, groups and operators are indeed certified according to their certifiers and to equivalent organic standards that adapt to local conditions (EU Commission, 2018). Instead, since 2018, operators in third countries had to comply with the same rules as EU operators. Beside using its soft power to shape and impose production and processor standards beyond its own borders, the re-organization of this new Regulation also implied a reorganization of well-established small holder supply chains from third countries, with the risk of jeopardizing business relations, functional structures and organic control integrity and overall, significantly increasing certification costs (FiBL, 2023). To this extent, authors (Omar, Thorsøe, 2023; Bureau, Swinnen, 2018) have also stressed how CAP subsidies initially have also contributed to promote domestic agricultural surpluses that resulted in food dumping in poor countries, therefore reducing their food security and favoring their dependency on cheap imported food. Together, these elements contributed to harm small farmers' access to local and transnational markets, destabilizing global markets, increasing prices and food insecurity. This regulation also permits organic certification for above-ground cultivation and does not set stringent limits for pesticides residues resulting from accidental contamination, which contrasts which countries like Italy that have very low tolerance levels for such residues (Lampkin, Sanders, 2022). Corrado (2018) has argued that this approach reflects a

market-driven orientation towards organic products, aiming to balance the increased intrinsic value of organic products with their transformation into commodities. Therefore, several authors stressed that (Ibid; Medland, 2016; Buck et al. 1997) certified organic farming itself does not guarantee an alternative approach to conventional agriculture, as the process of conventionalization and *mainstreamization* of organic agriculture, mentioned in the previous sections, undermines the chances of organic farming in enhancing food quality and environmental protection. Beside organic certification, food quality labels and other certification systems, were initially developed to assist and financially support farmers in adopting and integrating sustainable farming practices. However, this system has significantly shaped the original approach to organic farming, often leading to a simplification and standardization of practices and processes, thus perpetuating a "norm-control-regulator" scheme (ibid.).

The changes in the CAP and the development of an approach to organic farming that has become increasingly focused on the integration of these practices within the general framework of EU regulations have thus increasingly coincided with needs and priorities that went far beyond the field of agriculture, rural development and environmental protection. The continuities between the progressive integration of organic agriculture within much broader European policies, aimed at promoting the economic stability of Member States in the face of the great enlargement of 2004 (Agenda 2000), after the financial crisis of 2008 (Europe, 2020) and for the recovery after the economic crisis caused by the Covid-19 pandemic (Next Generation EU), makes it even more evident how the logic of green capitalism has functioned in recent decades to make environmental sustainability and green transition a useful terrain for capital to accumulate wealth and ensure economic stability in times of crisis. On the other side, this process of integration and the increased emergence of the sustainable development paradigm – which has found an ultimate concretization within the EU Green Deal and its Farm to Fork strategy (F2F), have also shown how this process continues to be far from linear and free from contradictions. As stressed by Bazzan et al. (2023), the challenge of shifting toward a sustainable food system and deploying the F2F Strategy by amending existing policies and integrating different policy frameworks stems from the broader challenge of attaining cross-sectoral policy integration.

3.1. Emerging contradictions in shaping the EU CAP for the Green Transition

The increasing alignment of European policies with the sustainable development paradigm, finally materialized in 2020 with the definition and adoption of the EU Green Deal and the Farm to Fork Strategy. At the beginning of Ursula von der Leyen's EU Commission's presidency, in 2019, the plan was presented as *Europe's man on the moon moment*[24], to highlight the disruptive and unprecedented scale of a green transition project aimed at achieving climate neutrality by 2050, reducing greenhouse gas emissions by 55% by 2030 and promoting a just transition to a circular economy, sustainable agriculture and reducing air, water and soil pollution while improving quality of life and public health (EU Commission, 2020). Within this framework, new eco-schemes addressing the environmental dimensions of F2F had to be implemented under national Strategic Plans so that Members States would be able to address F2F targets, the Green Deal targets, and the Biodiversity Strategy targets for 2030. For the first time, the EU was also giving a more central role to organic farming, setting the ambitious target of cultivating 25% of EU agricultural land under organic farming by 2030. Member States have therefore been encouraged to reflect this ambition in their CAP National Strategic Plans[25] (NSPs) and organic farming policies, highlighting the importance of organic farming in achieving broader environmental and sustainability goals (Ibid). In the EU Green Deal, agricultural policy is integrated well beyond the general context of agri-food system policies, which are called upon in relation to several objectives: to ensure that food chains operate in a fair, healthy, and sustainable manner; to promote an efficient and low-emission circular agricultural economy; to protect, conserve, and enhance natural capital; to safeguard citizens' health and well-being; and finally, to ensure the provision of quality food on a global scale (Ibid).

However, these ambitious goals have collided with global tensions and events (e.g., the Covid-19 pandemic and the war in Ukraine) that have called into question the possibilities and ways of putting green transition policies into practice. Considering the long-term impact that the Covid-19

[24] On 11 December 2019, the President of the European Commission, Ursula von der Leyen, presented the newly adopted 'EGD' Communication as 'a roadmap for making the EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all' (Press Release IP/19/6691)

[25] In the context of EU CAP, National Strategic Plans (NSPs) are the comprehensive frameworks that each EU member State develops to outline how they will use CAP funds and implement CAP measures to achieve specific agricultural and rural development goals. NSPs are designed to align with the broader CAP objectives and each MS can define a plan that reflects its unique agricultural conditions, economic needs and environmental goals. Within the last CAP 2023-2027, NSPs focused on sustainability, aiming to enhance economic viability of farmers and rural areas while providing tailored and detailed roadmaps for each country according to their national interests and priorities, and the wider EU goals.

pandemic may have had on the energy transition, some authors (Hosseini, 2020; Salisu et al., 2020) have identified two main approaches. On the one hand, a perspective supported mainly by the industrial and energy sector, in which the need to prioritize economic stability over decarbonization has prevailed and, as a result, has effectively supported a business-as-usual production model. On the other hand, progressive left and green political camps emphasized how policies for economic recovery after the pandemic could be an opportunity to promote a qualitative leap away from old fossil fuel-based energy systems (ibid). In the European context, therefore, public funding played a central role in promoting a particular approach to the transition, and the targets set within the Green Deal were strongly influenced by the pandemic (Misik, Nosko, 2023). The launch of the Next Generation EU Fund[26] was specifically defined to support Member States' economies in post-pandemic recovery, as well as the EU's main instrument to continue the "path towards a sustainable and resilient recovery, creating jobs and repairing the immediate damage caused by the pandemic, while supporting the Union's green and digital priorities″ (European Council, 2020). However, the urgency of developing a framework of measures to enable recovery from the pandemic was replaced by the need to develop a response to the war in Ukraine as of February 2022. The EU's vulnerability was clear from the outset, and Russia did not hesitate to use its energy resources - on which the EU was heavily dependent - as a weapon, leading the Commission to decide to reduce as much as possible and even eliminate the dependence on Russian energy resources (Bricout et al., 2022). As Misik and Nosko (2023) point out, two main perspectives have emerged. On the one hand, the rise in gas prices has transformed the discourse on energy resources into a discourse on the security of European countries. This led several Member States, led by Germany, to reconsider coal as a key energy resource, in clear contradiction to the goals set out in the Green Deal just a few years earlier. In contrast to this approach, others instead emphasized the need and urgency to accelerate the transition to renewable energy sources, to focus on energy efficiency and other measures to further reduce the use of fossil fuels (ibid). In order to overcome the energy crisis after February 2022, the EU finally found crucial new strategic

[26] The NextGenerationEU fund is a significant economic recovery and resilience initiative established by the EU in response to the COVID-19 pandemic. It represents a substantial financial package designed to support member states in dealing with the economic and social impacts of the pandemic, in promoting sustainable growth and strengthening the resilience of EU economies. The fund aimed at supporting reforms and investments that enhanced the economic and social resilience of EU countries and amounted to a total of approximately € 800 billion, that were including grants and loans. The fund has been allocated to member states based on various criteria and through various components (Recovery and Resilience Facility; React EU; Horizon Europe and InvestEU) and was mainly aimed at promoting green and digital investments and transitions, and at promoting economic and social resilience.

partners (mainly the US, but also several North African states) and further strengthened cooperation with existing ones (such as Norway). From this perspective, the experience of post-pandemic recovery and the impact of international conflict on the green transition clearly illustrated how geopolitical shifts on a global scale can significantly affect climate change mitigation efforts and their consequences. While the Covid-19 and Ukraine crises have highlighted the strong adaptive capacity of the EU and its policies, it is also useful to look at market failures in the energy transition and how these have undermined public confidence and political legitimacy in the green transition.

One of the contexts in which these contradictions have become more evident in the framework of the green transition is the agricultural sector. Indeed, since December 2023 numerous protests led by EU farmers, took place in several EU countries[27]. Farmers were indeed strongly criticizing the effects of 2023-2027 CAP measures and the way it attempted to promote the objectives and targets of the EU Green Deal. Indeed, the original proposal defined by the Commission envisaged that 40% of the total CAP budget for the 2021-2027 period would contribute to climate action and pursue the objectives of the Green Deal and the Farm to Fork strategy. In its final version the CAP 2023-2027 envisaged a general reduction of tax exemption for fossil fuels in agriculture, the obligation to comply with environmental requirements for access to direct payments, stricter rules on plant protection products and pesticides. As this resulted also in higher costs for farmers, the general mobilization of the agricultural sector was firstly motivated by an opposition against the legislative initiatives proposed by the Commission to pursue the objectives set out in the F2F and Biodiversity strategy (O'Brien, 2024). Protests were therefore asking to retreat from the Green

[27] According to Iocco et al. (2020), agriculture and food play a central role in the representation of Italian cultural identities, which were strongly mobilized during the protests shaking EU member states between 2023 and 2024. Within the Italian context, the rhetoric that equates food quality and Italian food has also been strongly used by right-wing governments and parties to articulate discourses based on nativism, authoritarianism and populist ideas. In this particular context, the argument embraced by right-wing Italian politicians was based on the idea that previous leftist governments, and EU's food strategies as F2F, have been ineffective in safeguarding the interests of Italian farmers against unfair international competition, thereby jeopardizing their economic sustainability and the cultural significance. As Borras (2019:3) emphasized, right-wing populism can be defined as "a regressive and reactionary type of populism that fundamentally promotes or defend capitalism in the name of "the people". In this regard, the actions of right-wing parties – especially in Southern European countries - have predominantly been associated to anti-immigrant stances. This has had a subsequent effect on farm labour and working conditions within the agricultural sector. In 2018 and 2019, the Italian Minister of the Interior, Matteo Salvini, released two security decrees that rendered more difficult for asylum seekers to obtain residence permit. Within the context of agricultural labour, these decrees had the effect of further increasing the vulnerability of African labourers employed within the fields (Iocco et al., 2020).

Deal and the Farm to Fork objectives on the part of both national governments and EU institutions and in 2024 the Commission proposed a series of changes to the CAP regulation agreed in 2021, including measures to simplify and reduce the burden of inspection and control measures for farmers and national administrations, as well as promoting a relaxation of some standards for farmers regarding access to direct payments (Matthews, 2024). The farmers' protests have therefore already led to significant changes in the EU policy landscape, primarily in terms of the rollback of the Green Deal legislative agenda and a general weakening of some of the environmental initiatives introduced by the CAP reform. Despite the fact that the protests of the European farmers also allowed an ideological attack to the transition, led by one of the most influential interest groups within the European framework - especially considering that the CAP accounts for roughly 33% of the European budget - and strongly supported by right-wing governments, the protests clearly revealed some of the contradictions inherent in the green transition. In addition to their criticism of the Green Deal and the measures proposed to promote a greater transition, the farmers who have led the protests have also harshly criticized the logic underlying the agri-food supply chains and how this is regulated by large-scale distribution to the detriment of producers, who are forced to meet the demands of price, production, and processing set by retailers in order to remain in the market (Finger et al., 2024). During the protests, the producers have indeed also harshly criticized the logic behind the European agri-food supply chain, in which many small farmers operate at a loss, while it is the large-scale distributors who secure the widest profit margins on their products (Ibid; Mazzocchi, 2024). This push has led numerous farmers to take to the streets in the early months of 2024 and highlights yet another contradiction within the framework of the European green transition, particularly regarding its social impacts. The Farm to Fork Strategy, in fact, includes among its objectives the aim to "support primary producers in the transition" and to "clarify the competition rules for collective initiatives that promote sustainability in supply chains. It will also help farmers and fishers to strengthen their position in the supply chain and to capture a fair share of the added value of sustainable production by encouraging the possibilities of cooperation within the common market organizations for agricultural products" (EU Commission, 2020). To this end, in 2019 the EU also approved the implementation of the Unfair Trading Practice (UTP) Directive (EU 2019/633)[28] in

[28] The Unfairt Trading Practices (UTP) Directive is a European Union regulation aimed at addressing and mitigating unfair trading practices in the agricultural and food supply chain that was adopted in 2019 with the aim to protect

the food supply chain, to improve the position of both farmers and small and medium sized business in food supply chain, the EU has adopted legislation that bans 16 unfair trading practices. The protests and demands made by the farmers, therefore, demonstrate that despite the objectives of the F2F and the UTP Directive, which start from recognizing one of the main limitations and problems of the agri-food supply chain, there has been no actual progress in this regard. Although the Commission has stated that the new CAP would "continue providing measures that aim to strengthen farmers' position (and cooperation) in a continuously evolving value chain" (EU Commission, 2019), both the protests by European farmers and several studies analyzing the effects of these policies at the micro and macro-economic levels (Omar, Thorsoe, 2023) have recorded very limited progress in defining competition rules, instead promoting greater reliance on biotechnology, precision agriculture, and the commodification of agroecological services to create greater investment opportunities through financial markets.

3.2. The integration of social aspects within the EU Green Deal and the Farm to Fork Strategy

Within the publication of the EU Green Deal, the EU recognized the need to address environmental and social challenges by tackling them together, considering them as interconnected and mutually reinforcing objectives. To this extent, EU Green Deal "sets the blueprint for a transformational change" (EU Commission, 2019), whereas the Farm to Fork represents its strategy for promoting a transition towards sustainable food systems. The EU Green Deal has indeed set a "roadmap for making EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all" (Press Release IP/19/6691), defining a framework for the future of EU policies by

farmers, small and medium-sized suppliers, and producers from unfair practices imposed by larger buyers, such as retailers and processors. The Directive bans a list of unfair trading practices, such as late payments for perishable goods, last-minute order cancellations, unilateral changes to contracts, and forcing suppliers to pay for waster products. The aim of the UP Directive was therefore to create a fairer and more transparent trading environment within EU trading environment in the agricultural and food sector to ensure that smaller players are not disadvantaged by unfair practices from more powerful actors of the supply chain. However, several authors have criticized the effectiveness of the Directive arguing that it has a limited scope (Swinnen, Vandevelde, 2020) as primarily protects smaller suppliers against larger buyers, pointing out that the effectiveness of the directive depends on national enforcement mechanisms that can vary across MSs (Russo et al., 2020) and suggesting that the directive may not sufficiently account for the complex market dynamics and power relations within the agrifood supply chain (Zilberman, Heiman, 2020).

specifying actions and policies to be carried in specific macro-areas that concern: 1) climate change; 2) energy; 3) circular economy; 4) building and renovation; 5) mobility and transport; 6) ecosystems and biodiversity; 7) toxic-free environment; 8) sustainable food systems (EU Commission, 2019). Therefore, the agricultural strategy and achievement of a sustainable food system were recognized as an integral part of carrying out the European socio-ecological transition, and the F2F Strategy was also designed to help farmers and fishermen to tackle the environmental consequences of climate change over food production (EU Commission, 2020).

While some authors (Schebesta & Candel, 2020) reserve high hopes on the possible positive impact of the F2F over CAP, others have criticized the little emphasis on farm systems transition therefore neglecting the social and structural aspects of food systems transformation. The tendency to focus on technical innovations, and to rely on digital and technological transition, the lack of concreteness and of specific policy suggestions, the non-binding nature of the F2F strategies and the lack of guidance on how these provisions and targets may be implemented, bear dangers in the actual possibility to address the identified objectives (Dobbs et al., 2021; Moschitz et al., 2021). Indeed, despite the F2F document explicitly refers to the synergetic relation between "ecosystems", "planetary boundaries" and "humans' health" (EU Commission, 2020), authors argue that neither the F2F nor the EU Green Deal, articulate these synergies into concrete policy proposals and instruments and the only indication on integrated policy-responses to socio-ecological transition, is the general recommendation of improving the coordination between EU policies, while fostering a systematic look at the EU legislation (EU Commission, 2019). While the F2F claims that addressing climate and food injustices between countries and individuals, should be achieved by "turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all" (Press Release IP/19/6691), it therefore seems that these broader and more ambitious goals are expected to arise almost automatically from provisions that are primarily focused on reducing carbon emissions and increasing yields, rather than from goals with a more structural and holistic approach (Mowlds, 2020). The attempt of connecting social and environmental challenges, is also expressed with the reference to the need to pursue a "socially just transition" aimed at leaving "no one behind" and at putting "people first, and pay attention to regions, industries and workers who will face the greatest challenges" (EU Commission, 2019). However, no further and more detailed provisions are

identified to address "potential trade-offs between economic, environmental and social objectives" (Ibid).

Considering the social impacts of the F2F, and the following integration of F2F principles and values within the CAP 2023-2027, these targets are particularly focused on increasing farmers' agency by strengthening their role and bargaining power along the supply chain. Indeed, according to the F2F, to achieve a successful transition to sustainable food systems, it is essential to target "primary producers who still lag in terms of income" (EU Commission, 2020). Therefore, measures and instruments to support primary producers, to regulate market access, and to promote education and training among both producers and consumers, are among the main objectives of the F2F strategy, and have been translated into the CAP 2023-2027 through measures aimed at supporting farmers position within the supply chain, and in promoting sustainable and economic growth. As previously discussed in the preceding paragraphs, the effects of the CAP 2023-2027 policies and the broader framework of the F2F Strategy have released several contradictions that will be further examined in the following sections.

While primary producers represent the main recipients of the F2F Strategy and of the most recent reform of the EU CAP for the 2023-2027 period, the Green Deal and the F2F also target the need to compensate those more affected by the transition, and to provide "access to re-skilling programmes, jobs in new economic sectors, or energy-efficient housing" within the framework of the Just Transition Mechanism (JTM)[29]. However, this framework appears to predominantly rely on a quantitative approach to labour aimed at assessing the effects of public policies on the number of jobs created or lost within the green transition. As stressed by Guillibert et al. (2022), this approach embeds the transition towards more sustainable practices into econometric projections of GDP, focusing on the relationship between capital intensity and labour intensity, while neglecting broader social considerations that shape labor composition and processes within the

[29] The Just Transition Mechanism (JTM) is a framework established by the European Union (EU) to support regions and communities most affected by the transition towards a climate-neutral economy. Its primary goal is to ensure that the transition will be fair and inclusive, particularly those regions that rely heavily on fossil fuels and carbon-intensive industries. The JTM is part of the EU Green Deal and together and consists in financial tools such as the Just Transition Fund, InvestEU Just Transition Scheme and the Public Sector Loan Facility, is aimed at supporting workers and communities more affected by the transition, un promoting the creation of new business and jobs in the sustainable sectors, and in fostering social cohesion by preventing the increase in inequalities and social tensions (EU Commission, 2020). Several criticisms have been moved by scholars and stakeholders to the JTM arguing that the funding allocated are insufficient compared to the scale of transition, and stressing that the allocation criteria may not always align with the actual needs of the most affected communities and may result in favoring regions with better administrative capacities rather than those most in need (IEEP, 2020; Pye, Jones; 2020; McKinnon, Zickfeld, 2020)

transition. On the other side, the F2F strategy has recognized the central role of agricultural workers, particularly in the light of the Covid-19 pandemic[30], which has particularly shed light on the centrality of migrant labour after the labour shortages that followed the introduction of cross-border mobility (EU Commission, 2020). In this context, the F2F also refers to the principles of the European Pillar of Social Rights, calling for an increased effort concerning "workers' social protection, working and living conditions as well as protection of health and safety as they could play a major role in building fair, strong and sustainable food systems" (Ibid). Although the F2F aims at promoting the creation of new jobs in the agricultural sector, there is a lack of a clear and precise definition of how this is to be achieved. To this extent, after the EU Commission released the F2F Strategy, a group of scholars committed to support sustainable food systems transformation, shared a public communication addressed to Frans Timmermans – at the time Executive Vice President of the European Commission for the European Green Deal – and to the other commissioners, to express their concerns regarding the final version of the F2F. While recognizing the many positive points raised by the F2F, the authors also express their concern regarding the overall framework within which the strategy was embedded, stressing the need to move beyond the "green economic growth paradigm" (Alberdi et al., 2020). On one hand, they have recognized the attempt of the F2F to adopt an integrated approach to food systems, encompassing all the supply-chain actors from primary producers to consumers; on the other hand, they emphasized the need to address the challenges related to food production in a comprehensive manner. Regarding labour in the food system, they stressed that although the F2F emphasize the need to create jobs, it fails to specify the types of jobs to be created or who the recipients of these jobs will be. They suggest an integrated approach that aligns the restructuring of agricultural labor with reforms in migration and asylum policies to facilitate the regularization of migrant rights and support the implementation of equal treatment provisions for all categories of workers. Such an

[30] The outbreak of the COVID-19 pandemic shed also light on the fundamental role played by migrant workers in the core sectors of the European economies, and particularly in the agri-food sector where the number of extra and intra-EU migrant workers employed is very high. A consequence of the mobility crisis that characterized the period, food producers and national governments discussed several measures to facilitate the mobility and the recruitment of seasonal migrants especially for the harvesting season. In May 2020, the Italian government launched a regularization scheme for undocumented migrants already working or willing to work in the agriculture, care and domestic sector. Despite the high number of applicants (220,000 according to the campaign "Ero Straniero", only the 5% of the applicants obtained a residence permit linked to a work contract. Following these shortcomings, Piro (2022) stressed how this resulted in strikes and protests aimed at claiming for more workers' rights in the Italian agricultural and at showing how the living conditions of migrant workers employed in agriculture, were deeply interconnected with the low levels of remuneration, and with the unsafety and uncertainties of working conditions.

approach would also promote social and economic inclusion in rural areas and introduce conditionality for CAP payments based on compliance with labor rights.

In the design of healthy and environmentally sound food, Mowlds (2020) suggests to focus more on *what* is produced and *how* it's being produced, considering two main components of food systems: agency and sustainability. With the concept of agency, the author refers to the capacity of individuals or groups to make their own decisions about what foods they eat or produce, focusing on their ability to engage in processes that shape food system policies and governance. Conversely, sustainability refers to "the long-term ability of food systems to provide food security and nutrition in a way that does not compromise the economic social and environmental bases that generate food security and nutrition for future generation" (Ibid). From this perspective, the critique by Alberdi et al. (2020) highlights how the F2F approach, based on a logic of growth and economic development, risks falling into contradiction between an approach based on an aware and informed choice of consumers and an interventionist approach where legal and regulatory measures play a central role. In particular, the authors criticize how the use of fiscal incentives to contribute to the modification of production and consumption patterns (especially concerning organic agriculture) risk favoring the growth of industrial organic agriculture rather than that small-producers' alternative practices. Indeed, as one of the main ambitions of the F2F strategy is to reach 25% of EU's agricultural land under organic, scholars have stressed how this goal requires a holistic approach that should not only focus on producers and farmers, but should also be aimed at converting the whole value chain, including input providers, processors, involving all the actors from the logistics, storage, processing and trade (Moschitz et al., 2021). While this perspective seems to suggest a stronger integration of organic agriculture within industrial global value chains, Alberdi et al. (2020) recall to a holistic management of the agri-food system in reference to agroecological approaches, which are much more focused on the regeneration of soil, carbon capture and the prevention of natural disasters by promoting respect for biodiversity (Ibid). Rather, the approach of the F2F is much more focused on what Horling and Marsden (2011) defined a "*bio-economic"* model for agricultural development in the form of integrated farm techniques, ICT (Information, Communication, Technology) applications, technical and crop improvement and genetic modification that would result in the designing sustainable systems that remain linked to intensive production, rather than favoring local practices, NGOs projects and small-farmers initiatives. Therefore, several authors (Brunori, 2022; Benegiamo et al. 2023) criticized how the

F2F relies on a digital transition and on precision agriculture by promoting the integration of new technologies for agricultural production and processing, that should guide the transition towards more sustainable practices. On the other hand, they also stress how this would also favor an increasing role of financial investors and institutions, rather than of public policies, resulting in further promotion of the concentration of land in large producers, and accelerating the disappearance of small producers who are at the heart of agroecology and sustainable approach to food systems (Benegiamo et al., 2023; Alberdi et al., 2020). This entanglement and interconnection of actors, interests and policy approaches proves the urgency of defining more equitable and sustainable practices, but also emphasizes the difficulty of achieving this goal. One of the hardest challenges relies in the cross-cutting and multi-scalar nature of food systems that force policy makers to bring together rules, and to define critical policy objectives in relation to health, equity, sustainability, reliance and inclusive, economic growth (Leewis, 2021). To this extent, it is therefore worth it to recall the concept of corporate environmental food regime (Friedmann, 2005) introduced in the previous sections, as this perspective allows to focus on how capital's global value relations have also favored the emergence of contradictions within the crisis, transformation and transition of global food systems. As such, the following section will describe the analytical approach adopted within the context of this research to set the basis of the empirics.

Indeed, the design of this research was defined by the desire of analyzing, on the one hand, the way in which the integration and industrialization of organic agriculture has affected working conditions and processes and, on the other hand, how this process has also affected the power dynamics that operate between different actors in the supply chain. Finally, I wanted to analyze the results by taking into account the need for a systemic approach to the issue of the green transition of agri-food systems, as suggested by Alberdi et al. (2020), and thus consider the supply chain as a whole, organization and dynamics affect not only working conditions, but also the living conditions of those employed at different production stages, as well as the ecological and environmental implications of adopting more sustainable practices.

Chapter 3. Putting theory into practice: defining the theoretical framework and the methodology

Introduction

To comprehensively examine the nexus between the green transition and labour, the design of the research is based on the conceptual framework developed by Elena Baglioni et al. (2022). In this regard, they consider "labour regimes a category of theory and a tool of method" that enables the comprehension of capitalist exploitation as a phenomenon that extends beyond the productive sphere (e.g. workplace labour). They conceptualize the labour regime as a conjunction of social relations and institutions that connect capital and labour, within which workers have the potential to enhance their conditions of existence through the exertion of diverse forms of individual and collective agency. As labour is entailed within broader spheres, the authors argue that "there is no production without circulation, and also without the reproductive work that provides labour power, or the ecological relations that provide the matter, means and forces of production" (Ibid: 82). To this extent, their approach to labour regimes is aligned with the conceptualization elaborated by Frederic Deyo (1981) and later echoed by Taylor and Rioux (2018). This perspective defines labour regimes as mechanisms through which labour is socially reproduced, mobilized and motivated for economic purposes and utilized in production[31].

[31] Deyo's (2018) approach to labor regimes recalls the process through which workers are produced and workforce is formed. Therefore, Taylor and Rioux (2018) consider the four moments identified by Deyo (mobilization, motivation, utilization, and reproduction) as the necessary tools to examine how workers are produced in practice. They start by considering that the first immediate domain where the reproduction of workers takes place is the household, where children are born, raised and socialized, and where workers rest, eat and sleep. Although in some countries, especially in the West, the state also plays an important role in the reproduction of labor by providing welfare programs and public services, several generations of feminist scholars have emphasized that the roles and responsibilities of social reproduction are pervasively assigned along gender lines. The second dimension is the dimension of labor mobilization, which refers to the process by which workers are drawn into particular occupations or jobs and thus become labor. It therefore has to do with the segmentation of labor, where each segment of labor is shaped by different qualification and occupational criteria (e.g., specific workplace and livelihood norms, social divisions of class, gender, ethnicity, and age, the role of state and agencies). The third dimension is the motivational one, which refers to the process of shaping how workers perceive their own roles, and therefore how workers engage in their own representation, challenging and contesting the ways in which they are represented by managers or by the state by seeking their own collective representation. Finally, the use dimension refers to the use of labor in the production of goods and services, and therefore refers to labor power and the tensions that arise between employers and workers, who will often be in conflict over the organization of work.

Baglioni et al. (Ibid) propose an elaboration of the concept of labour regimes with the objective of developing a framework for investigating how the architecture of labour regimes underpins labour exploitation. Therefore, they identify four spheres within which this relation is articulated: Production (P), Circulation (C), Social Reproduction (S) and Ecology (E) that are considered central for the construction and manifestation of exploitation at multiple scales (ibid).

As this framework allows for a deep and comprehensive analysis of the organic and sustainable agri-food chain both at a meso and micro level the framework elaborated by Baglioni et al. (2022) has been adopted for the analysis of the results collected during the periods of fieldwork. Indeed, this framework not only enables to recognize and identify the intersections between the four different spheres and therefore to analyze the directions they take, but also allows to consider the multi-scalar and multi-dimensional nature of transformations and changes. Building on this analytical framework and considering the initial research objective of examining the social and labor implications of the green transition in the European and Italian agro-industry – it became clear that several additional factors needed further exploration. Indeed, this section, utilizing the aforementioned framework, identifies how the processes of production, circulation, social reproduction and ecology interact within the context of Italian agriculture, particularly in regard to the impact of the green transition and the proliferation of sustainable and organic practices. The analysis of these interactions is therefore contextualized in light of the most recent transformations driven by the EU Green Deal and its F2F Strategy, as well as in light of the broader changes that have shaped the global agri-food sector in the last decades, as discussed in the previous sections.

The operationalization of this approach to labour regimes, as outlined by Baglioni et al. (2022), has facilitated the development of a framework for analyzing the impact of the emerging corporate environmental food regime (Friedmann, 2005) on labour. It has also helped to identify the principal research questions that shape the scope of this research. The following sections describe how the spheres of Production, Circulation, Social Reproduction and Ecology have been operationalized and adapted to the context of this research and how this process has been fundamental both for theoretical and analytical purposes. On the theoretical side, this effort allows to better comprehend how the theory of labour regime interacts with the food regime theory, thereby enabling to establish a set of relations across subjects, institutions and across different supply chain levels. Moreover, it also allows a deeper and full understanding of the repercussions of the green transition on the labour process and labour forms, taking into consideration how the labour regime arises, evolves

and re-emerges in varying ways according to the specific context. On the analytical side, the operationalization of this framework and its adaptation to the context of the organic value chain in the Italian context has represent a tool that allowed a deep analysis of the materials collected during the fieldwork. In this respect, the labour regime framework allowed the integration of the meso and micro levels of analysis, while also providing a rationale for the decision to focus on two distinct levels of the value chain, namely agricultural production (production) and the logistics and distribution (circulation), while also considering how labour conditions affect workers' lives outside workplaces (social reproduction). Furthermore, the general context of corporate environmental food regime and the growing role of organic food was maintained as a backdrop to the research. The following sections offer a brief introduction to these four dimensions and a detailed description of the framework that has been adopted to define and draft the design of the empirical research. This framework has represented the starting point for the analysis of the interviews and the materials collected during the periods of fieldwork, enabling the identification of the points of intersection between these spheres, thereby identifying the principal areas of investigation and analysis to be pursued during empirical research. This process enabled the identification of the principal areas of investigation and analysis to be pursued during the empirical research. In line with the framework delineated by Baglioni et al. (2022), who emphasized the imperative to initiate the process by distinguishing and defining each sphere to elucidate the potential interactions among them, the tables presented in the following sections (Table1; Table 2; Table 3 and Table 4) present for each sphere the predominant processes (the *What*), and the pivotal mediating mechanisms (the *How* and *Where*) which eventually facilitate the understanding of the interrelationships between the four distinct spheres.

1. Production (P)

As the aim of labour regime analysis is to explore how labour processes and labour forms take place, one of the first questions to be addressed according to Baglioni et al. (2022: 88), is to understand how workers are employed, who is employed, where and for what task, and by whom they are managed and controlled. Therefore, it is necessary to identify the main aspects (*What*) to be considered when exploring the interaction of Production (P) with the other spheres. Baglioni et al. (2022: 83) primarily suggest considering the many possible forms of labour. This includes the

degrees of formality or informality that characterize working conditions (e.g., contractual conditions, seasonal, temporary or permanent working conditions), wage levels, and social divisions (e.g., race, gender, ethnicity) that result in different forms of employment. In the agri-food sector, characterized by a strong presence of migrant workers, it is relevant to explore how national differentiations and different citizenship statuses lead to specific employment contracts and tasks which might vary across space and time depending on the value chain level.

Table 1. Operationalizing labour regimes for the agri-food sector: Production (P)

	What?	How?	Who?	Where?
Production (P) *How are workers employed?* *Who is employed?* *Where are they employ?d?* *For what task?*	**Forms of employment** (formality vs. informality)	Contractual conditions Wage levels Labour intensive tasks Fragmentation and segmentation Differentiation at different GVC level Social divisions (e.g. race, gender, ethnicity) Sexual division of lbour Migration and labour regulaitons	Farmworkers and workers employed within the warehouses and the agrifood markets Producers and Farmers Managers Contractors Trade Unions Recruiters and managers Temporary agencies Informal operators National and sovranational authorities regulating work, migration and the transition of the agri-food sector Members of the associations that provide support to workers (e.g. Caritas, Emergency, Casa Valdese)	Workplace (green houses, warehouse of agri-food markets) Trade unions Administritative offices Associations that provide support to workers Housing and living conditions
	Labour Process and Labour Power	Structures of labour relations (e.g., productivity, intensity, wage, role of technology) Labour mobility and turnover Workers organization and conflict (e.g., strikes, forms of organization, resistance and agency) Management of the workforce Segmentation of workforce in bargaining activity and unions organization		
	Labour control	Simple control Supervision and surveillance Technology control Cohersion Incentives and opportunities for personal advancement Management of borders, national regulations on labour Fragmentation of workforce Precarious and flexible contracts		
	Differential inclusion	Sexual division of labour Social, technical and ethnical divison of worker tasks Division of workers within the workplace Fragmentation and segmentation of workforce		

Source: elaboration of the author based on Baglioni et al. (2022:89)

For instance, at the bottom of the supply chain where labour tasks often depend on the seasonal workforce, seasonal contracts are more popular compared to the logistical and distributional level. Despite this, contracts are still mostly temporary and based on subcontracted labour, with

contractual and employment differences that follow a logic of racialization aimed at supporting a segmentation of labour within the workplaces (Piro and Sacchetto 2020). The differentiation of employment forms and the underlying logics span the value chain often crossing regional and transnational dimensions, and social differences are translated into different forms of labour within the workplaces. Thus, analyzing labour forms at the production levels must also consider the role of the State and of governmental provisions, which play a central role in defining labour market and migration management, thereby determining a differential inclusion of labour (Mezzadra and Nielsen, 2014) that draws boundaries between different forms of labour access and labour process. In the context of the transition towards greener and more sustainable practices, the role of the State and of international regulations must also be considered in relations to the normative and regulatory framework promoting such practices, particularly the F2F Strategy and of the CAP 2023-2027, as mentioned in the previous sections.

Another dimension that Baglioni et al. (2022) suggest considering is that of labour process to investigate everyday farmworkers and employers' struggles within the workplace. This involves examining how different management systems can vary across sectors and value chain levels leading to specific workers-capitalist relations where recruiters, contractors and managers can shape labour power, referring to the individual capacity to work over a given period of time. This leads to fundamental tensions where employers and employees conflict over the organization of work (Taylor and Rioux, 2018: 45). Hence, key issues around which tensions may arise include the length and intensity of work, the timing of work, the specific tasks performed and the role of technology, are among the main issues around which tensions may arise (Ibid). Therefore, it is essential to consider the specific ways through which workers develop and cope with their claims within the agricultural sector, establishing different forms of agency and of conflict that are also dependent from different gender, race, and class positions. In this sense, it is useful to recall back the concept of labour power as conceived by Chris Smith (2006: 390) according to which labour power – corresponding to what the employer hires and the workers exchange - is inherently indeterminate as the exact amount of effort to be extracted cannot be established before the worker is engaged in the labour process. Thus, labour contracts do not specify the exact amount of work to be done, but rather set the conditions under which the employer or the supervisor enforce or creates, through consent, a definite output to be produced by workers over a definite period of time (Ibid). As such, labour processes are dynamic, requiring active participation from workers and

involvement that can manifest as compliance with instructions or in forms of workers organization and resistance. When analyzing working conditions in the fruit and vegetable sector, two main concepts emphasized in the literature on migrant labour are particularly interesting: labour mobility, and the differentiation of trade union practices. Considering labour mobility, Alberti and Sacchetto (2024: 14) understand labor turnover no simply as an individual and collective movement of workers in and out of work. Rather, they conceptualize labour mobility as a form of workers' agency that allows them to develop a certain degree of negotiability. According to the authors (ibid), this is particularly evident in the case of migrant workers, where the conflict over mobility can be interpreted as a form of power and resistance. In such contexts, the labor market, as well as activities related to the maintenance and reproduction of the workforce outside the workplaces, are characterized by hierarchies and differentiations that depend not only on race but also on gender aspects (Ibid). As the next chapters will argue, within the agricultural sector, at both the production and logistical level, labor mobility represents one of the main forms of resistance for migrant workers who are often employed under precarious and informal conditions.

As argued by Piro and Sacchetto (2021) role of race and racialization also supports labour segmentation not only by accelerating the worsening of labour conditions but can also be mobilized among subcontracted migrants to produce racialized forms of solidarity within the organization of union activities. To this extent, the authors show how unions differentiate bargaining activities and representation of workers according to their members – whether workers are dependent from the main company or outsourced workers and according to the sectors they belong to – increasing the fragmentation of the workforce and therefore exacerbating the racialization and social distancing among workers (Ibid).

The final dimension to be considered is that of labour control that managers exert on the labour force to ensure it functions in a disciplined and efficient manner that maximized productivity and that allows to turn labour power into realized labour that produces goods or services (Taylor and Rioux, 2018: 46). To this extent, types of control can vary between workplace and geographical contexts. Edwards (1979) defines as *simple control* the exercise of direct power in the workplace such as immediate supervision, surveillance and coercion of workers. He then considers *technical control* the type of control exerted through technology and that is often employed in heavily automated sectors, as mostly happens in platform companies where digital control does not only increase the control over the workforce but tends to invite them to participate in an implicit process

of self-management (Chen, 2022). Finally, Edwards (1979) highlighted the existence of a form of *bureaucratic control* where a series of rules and regulations governing the workplace structure pay rises, opportunities for personal advancement and incentives for good performance that are finalized at maximizing productivity. While workplaces tend to be structured by the combinations of these different forms of labour control, according to the context, to the sector and to the degree of technologization, other factors shaping the labour regime such as internal and external borders.

2. Circulation (C)

Baglioni et al. (2022:83) argue that the sphere of circulation represents the process that precedes production, and pertains to the distribution of commodities, including the moment of exchange. At this stage of the value chain, the primary actors are commercial capitalists and leading firms which play a crucial role in influencing the dynamics and logics of global value chains. The authors posit that from a labour regime perspective, it is essential to prioritize the examination of circulation as a means of understanding who controls production and how; what is the prevailing division of labour among capitals, and what are the ways in which credit and debt relations intertwine with the labour process and the livelihoods of workers (Ibid:91). Since the '50s, the "logistics revolution" has radically transformed the relationship between production and circulation, determining a complex redefinition of global spaces. As the scale of the logistic revolution became global, Grappi (2016), has also stressed how this geographic expansion has also increasingly involved the politics of States and governmental actors. Along with the increase in the speed and profitability of transportation and of the circulation of goods, according to Grappi (Ibid: 11) logistics is also capable of synthesizing different and distant spheres of regulatory production, introducing new modes of governance and decision-making, and promoting processes of institutionalization and territorial reorganization whose relevance is not only economic.

Exploring these aspects in the context of agri-food value chains, requires focusing on four central and interconnected aspects that determine circulation and therefore determine production and labour conditions. These aspects are intermediation, certification, structures and dynamics of global supply chains and exports, and the role of prices. According to Loconto and Busch (2010) intermediation "involves the activities carried out by intermediaries to ensure that the standards are implemented and maintained across various segments of the market. These intermediaries,

which can include certification bodies, auditors, standard-setting organizations, play a crucial role in translating, mediating and enforcing the standards to ensure compliance and facilitate market transactions". This definition emphasizes the role of intermediaries in translating and enforcing standards and therefore defining the rules that shape global value chains. Within the agri-food system, where large retailers mostly play this leading role, the increased role influence of intermediators has come together with the industrialization and financialization of the agricultural sector that favored the entrance of new financial and business actors, and a progressive verticalization of the supply chain (see paragraphs 1.2.1).

Table 2. Operationalizing labour regimes for the agri-food sector: Circulation (C).

	What?	How?	Who?	Where?
Circulation (C) *Who controls production and how?* *What is the prevailing division of labour among capitals?* *What are ways in which credit and debt relations intertwine with the labour process and the livelihoods of workers?*	**Intermediation**	Defining standards Implement guidelines and regulations Enforce certifications Bureacratization of governance Participatory Guarantee Systems (PGS)	Retailers Certification bodies Auditors Standard setting organizations Brandizations Organization of Producers Financial traders and intermediaries Audit and certification bodies	Space between private and public Agri-food markets and alternative distribution channels Mediation wihtin the agri-food markets (Bologna and Padua)
	Certification	Standardization of production and process Increase in competition Increase in costs Verticalization and hierarchization of the supply chain Quality turn and environmental-friendly production labels		
	Global supply chain and export	Increase in the difference between Northern and Southern countries		
	Prices	Value squeeze From producer-driven to retail-driven Credit and debt relations Increased competition among producers and farmers Standardization allows retailers to switch easiliy among supplier in search of the lower cost		

Source: elaboration of the author based on Baglioni et al. (2022:89)

As global retailers and large multinational brands dominate circulation through procurement practices, by mapping strategies through which different commercial sectors impose specific rules, targets and outcomes, in order to capture the final effect on labour, it is necessary to focus also on

circulation (Baglioni et al., 2022: 91). To this extent, authors (Loconto, Busch, 2010; Loconto, 2017; de Castro Pericacho et al. 2021) have stressed how this process of intermediation is located in between state regulators and producers, where managers, audits, and private actors, can define rules and standards for the regulation of production processes by rearticulating a private form of bureaucratization and therefore affirming a new model of governance within global agri-food value chain. This process has also been favored by the increased demand for high quality, ethical and environmental-friendly products (see paragraphs 4 and 5 Chapter 1) that corresponded to a heavily standardization of quality conventions where quality, tradition, environmental sustainability and health were gradually translated into new forms of economic bureaucratization and into new ways for governing global agri-food value chains (Goodman, 2003). Both within industrialized agriculture and in the context of alternative food system networks, recent experimentations in food systems have therefore pushed the boundaries of traditional roles in linking farmers to the final consumers. While within global agri-food value chains the hybridization of public and private is delegate to experts and professionals which define standards and certification systems to control and govern global production (de Castro Pericacho et al., 2021), intermediaries can also become part of local infrastructural and institutional environments where smaller organizations provide support for producers to learn sustainable techniques and favour market stability as in the case of farmers networks and PGS (Farreras, Salvador, 2022; Loconto et al., 2016). To this extent, production processes have been significantly influenced from the spread of certification schemes for sustainability that contributed to encourage private sectors' involvement in the promotion of sustainable and organic practices at different levels of the supply chain (Neilson and McKenzie, 2016; Fold and Neilson, 2016). Furthermore, a 2012 survey conducted within Indonesian Cocoa Industry also suggested that the compliance with certification requirements for sustainability was associated with an increase in labour demand – often linked to the intensification of labour practices – and therefore adding further challenges for farmers facing potential labour shortages (Hafid et al., 2013).

Hence, it is necessary to consider the circulation sphere not as disconnected from the producer level and from the forms and processes of labour organization. Rather, the increasing role played by commercial capitalists, large retailers, certifying bodies might significantly affect workers by squeezing prices on the production side, and by imposing specific procedures and practices that affect workers activity. Moreover, the increased competition among farmers imposed by the

stricter requirements imposed at higher levels of the value chain, might force them to recur to outsourcing of workers, or to decrease wages of farmworkers and warehouse workers employed within agri-food market in order to reduce their fixed costs. In fact, the problem of costs is one of the main aspects that, in the logic of the supply chain, influences the behavior of producers and farmers, and the transition from a producer-driven supply chain to a retailer-driven system (Gereffi and Korzeniewicz, 1994) has greatly influenced the activity of the production sphere and its consequent effects on labor and work processes. From this point of view, certifications are in fact a fixed and additional cost for producers, while the process of standardization of production is functional to increase competition among producers and allow the retailer to be able to choose from a fairly diverse number of suppliers who can offer the same price, obviously aiming at the producer with the lowest price. To this extent, beside the promotion and the identification of environmentally sustainable practices, setting the "right" and "fair" price for food is one of the most relevant economic challenges within sustainable food systems, which is mostly due to the week and often null participation of produce in the price-setting process (FAO, INRAE, 2020: 63).

Adopting a global value chain (GVC) perspective, and therefore considering the structures and the connections along value chains at a global level, it is possible to understand how the role of standards, rules and the increased control among retailers, is functional to reduce the costs and the time needed for production (Gereffi, Korzeniewicz, 1994). To this extent, the agri-food supply chain is based on particular high level of standardization and bureaucratization which is also linked to the nature of the commodities produced and supplied which can quickly deteriorate and therefore require a regulatory framework able to reduce uncertainties at the minimum level (Caruso, 2017).

In the context of this research, the sphere of circulation and its link with the rest of the dimensions identified by Baglioni et al. (2022) as proper of the labour regime framework, emerged in the context of the research conducted within the two agri-food market of Padua and Bologna. In these markets, the form of labor that is more affected by the transformations and processes mentioned above, was that of warehouse and logistic workers. As Baglioni et al. (2022: 91) observe, the sphere of circulation is indeed marked by a multitude of potential starting points, where the boundaries between production and circulation may not always be clearly delineated and where circulation may simultaneously breed and conceal processes of surplus value appropriation through the use of finance and market power. Therefore, research of this nature,

which focuses on the various aspects and levels of the supply chain, enables us to examine the numerous ways in which different actors and dimensions interact, and to identify both contradictions and aspects of continuity.

3. Social Reproduction (S)

Broadening the lens and connecting the dots with other spheres of social reproduction, also requires taking into account the contribution of feminist political economy debates on labour, and therefore consider the entire set of activities that facilitate the maintenance and the reproduction of labour. As suggested by Silvia Federici (2020), Marx recognize that labour-force is not a natural entity, as it is continuously consumed within the labor process and therefore requires continuous reproduction.

Table 3. Operationalizing labour regimes for the agri-food sector: Social Reproduction (S).

	What?	How?	Who?	Where?
Social Reproductuon (S) *Who reproduces the worker, where and how?* *What reproductive costs are assumed by workers or the state and/or capital?* *How the reproduction of differences (between and within classes) is effected through different institutions?*	**Patriarchal and racial institutions that shape social relations**	Social differentiation and differential inclusion linked to gender, ethnic and race Institutional racism	Farmworkers and workers Employers Landlords Members of support associotiations and trade unions Women and young girls Children	Living space Social space Workplace
	Reproductive activities linked to the household	Access to transport Connection with towns and small villages Access		
	Housing and living conditions	Dormitory regimes Informal settlements Segregation in the country side Reduced access to housing for migrant workers Individual and families living in employer-led accomodations Migration laws and regulations (e.g., Bossi-Fini Law) Differention among migrant workers (EU vs non-EU citizens)		
	Access to public and social services	Access to school Differentiation in school choices for children on the basis of sex Access to reproductive health		

Source: elaboration of the author based on Baglioni et al. (2022:89)

This reproduction is thus one of the fundamental aspects of capital valorization, as it allows for the reproduction of the worker, which is a necessary condition for capital accumulation. However, there is no passage in *Capital* where Marx recognizes that the burden of reproducing the labor

force requires specific domestic activities that are generally performed by women and that are not remunerated. Despite social reproduction has been historically associated to women – in a way that was functional to obscure its importance and value and therefore ensure free and unwaged activities that were still fundamental for capital accumulation – Baglioni et al., (2022: 92) stress the need to analyze labour regimes by investigating also who reproduces the workers, where and how; what reproductive costs are assumed by workers, by the State and by the capital, and how different contexts and institutions can determine the reproduction of differences. Therefore, while the reproduction of labour takes place where children are born, raised and socialized, where workers rest, eat, sleep, wash and find emotional support and companionship, social reproduction also refers to "how people and lives are reproduced at a daily level while remaining anchored to forms of social oppressions that mediate class, but also pre-date it" (Mezzadri, 2018). Therefore, the first dimension to be considered within the sphere of social reproduction is that of patriarchal and racial institutions that shape social relations, determining different roles outside the workplaces and within the households, and different access to welfare service.

In the context of this research, this interdependence between production and reproduction its deep systemic roots in the structure of the current social and economic order which Fraser (2017) characterizes as financial capitalism, are particularly evident and reproductive activities also determine levels of exploitation by setting lower wage costs for the workforce and therefore class relations and social divisions are also shaped within the reproduction process. From this point of view, the following chapters will highlight how well-defined patriarchal roles within family contexts determine marked differentiations in the relationship with the public sphere and in the access to welfare (e.g., medical care, school and education), and how, at the same time, these elements of differentiation are in turn rooted in conditions of marginality and social exclusion, such as those that characterize life in the countryside of the province of Ragusa. In the context of the agro-industrial enclaves and country sides of Southern Italy, where the number of migrant workers is consistently high, the issue of housing and living conditions is therefore closely linked to the effects of *differential inclusion* (Mezzadra and Nielsen, 2014). This differential inclusion is often reproduced and imposed primarily by the State and by migration policies. In the Italian case, for example, the Bossi-Fini law, introduced in 2022, stipulated that the residence permit of a non-EU worker must necessarily be linked not only to a work contract, but also to a residence contract. In the context of agriculture in the Southern Italian countryside's, several authors have highlighted

how this often results in the formation of informal encampments that are supported by activities of trade unions or militant organization (Brovia and Piro, 2020; Massari, 2023). This evokes a worker-employer nexus that extends beyond labor relationship and that affects the productive sphere, as many individuals and families live in housing provided by the same employer.

Therefore, social reproduction is not merely a conceptualization of domestic or care work. Rather, it is essential to consider a multitude of factors when analyzing labour processes and labour regimes, as these are profoundly influenced by the distinctive production systems that characterize particular times and spaces and consequently shape also the access to workplace relations and to various forms of welfare (Alberti and Sacchetto, 2024: 15). As such, the role of public and legal institutions in perpetuating and reproducing these differences is essential as the ability of workers to reproduce themselves also depends on their access to healthcare, education, housing and clean resources that are characterized by an uneven distribution which disproportionally excludes non-white, non-male and non-citizen workers (Baglioni et al. 2022: 93).

4. Ecology (E)

According to Elena Baglioni (2023), capitalist labour processes can be reconstructed as ecological processes that is structurally shaped by spaces and institutions where social reproduction of workers and the working class takes place. In her contribution, the author adopts a broad understanding of ecology, and refers to it as a set of relationships and processes between living things and their surrounding environments (Ibid). As such, authors delve into the dimension of labour process to investigates its relationship with the sphere of ecology and social reproduction, considering them as underpinning functions of capitalism and recalling also the definition of capitalism as an *ecological regime* (Moore, 2015) which does not only have an impact on nature, but rather works through it. In light of the objective and interest of this research, it is imperative that this theoretical framework recalls and elucidates some of the main concepts introduced in the previous sections. These include the concepts of Just Transition and Corporate Environmental Food Regime, which have already allowed to anticipate several elements of continuity between the spheres of production, ecology, and how these interact with the spheres of circulation and social reproduction in the context of the transformation of agri-food systems and a growing interest towards environmental sustainability. From this perspective, it is worthwhile to examine some of the key questions identified by Baglioni et al., (2022: 93). These include identifying the ecological

challenges and opportunities that capital faces in each of the four spheres and how capital responds by appropriating and transforming nature into a commodity. In light of these inquiries, we may also examine the function of labor within the production and reproductive processes, as well as in their intermediate stages. This allows to address some of the contradictions and tensions inherent in the ecological transition and its effects on labor, as previously discussed.

In order to address these aspects of the ecological sphere, it is necessary to consider a few key points, particularly in the context of the Italian agribusiness supply chain and the transformations currently occurring in the organic market. First and foremost, the effects of climate change should be considered, as they are currently putting a great strain on agricultural activity, especially in the Mediterranean area, increasing the vulnerability of the sector and making mitigation and adaptation interventions more costly and urgent[32].

[32] The Mediterranean region is currently facing significant environmental challenges in the agricultural sector, that are exacerbated by climate change. Several studies (IPCC, 2022) in recent years have assessed the effects of climate change on agricultural suitability and yield reduction in the Mediterranean region, stressing how environmental degradation is exacerbated also by intensive farming practices that favor soil degradation and desertification, biodiversity loss, water scarcity and water loss, and pollution. According to the MedECC (Mediterranean Basin Climate Change Assessment Report) (2021), the Mediterranean region has warmed by 1.4°C since the preindustrial period, compared to the global average of 1.1°C and this has favored an increased frequency in extreme weather events with negative effects on the agricultural sector.

Table 4. Operationalizing labour regimes for the agri-food sector: Ecology (E)

	What?	How?	Who?	Where?
Ecology (E) *What sets of ecological obstacles and opportunities does capital encounter in production, circulation and social reproduction?* *How does capital appropriate and transform nature into commodities?* *How are workers deployed in the process as forces of nature themselves?*	**Climate change and environmental degradation**	Relevant consequences for the agri-food sector Increased costs for adaptation and mitigation Increased competition among producers Increased vulnerability Increased temperatures that affect working	Farmworkers and warehouse workers Retailers Certification bodies Auditors Standard setting organizations Members of environmental associations Trade unions	Workplace Living conditions General surrounding environment
	Just Transition and Corporate Environmental Food Regime	National and regional regulatory and policy framework favoring the adoption of more sustainable practices Increased role of certification bodies Integration and mainstreaming of environmental claims		
	Supply chain relations	Seasonal production vs deseasonalization Increase in competition Certification schemes Quality turn and more evironmental-friendly practices		
	Workplace and living conditions	Housing and living conditions Health issues (e.g.,exposure to pesticides and fertilizers) Differential exposure to harmful conditions that depends on social differentiation (race, class, gender)		

Source: elaboration of the author based on Baglioni et al. (2022:89)

To this extent, the effects of climate change and its ecological and material consequences, also have significant impacts on the organization of global supply chain, since high temperatures increase competition between producers in the North and in the South, with detrimental effects on the latter who are normally accustomed to increasing their production in Northern countries, where low temperatures make it impossible to produce many fruit and vegetable products. The advent of a corporate environmental food regime (Friedmann, 2005) oriented towards enhanced sustainability and quality agri-food production, has also resulted in a progressive integration of ecological and social elements that have been distorted from their original meaning by favoring the increase of large agri-business retailers and certification schemes (see section 1.2). Furthermore, from this perspective, within the agricultural sector, by speeding up relations of production and exchange, perishable commodities often drive intensified exploitation in fields, transport and processing (Baglioni et al. 2022: 94) often reinforcing the rhetoric of agricultural exceptionalism that according to Friedman (1993) "represents the cornerstone of national and regional agricultural policies and that served to protect domestic food systems and rural livelihoods

from the full force of global market pressure (…) often coming at the cost of perpetuating inequalities and environmental degradation".

Considering conception of ecology developed by Barca and Bridge (2015), ecology sets a set of relationships and processes between living things and their surrounding environments that follows the invite to see industrial workplaces as peculiar sets of ecological systems where workers' bodies can be considered as biological processes that interact with the labour process and with a wider set of social regulations. To this extent, while adopting a labour regime perspective, the relationship between body and labour process can also be analyzed from an ecological perspective in order to explore how workers are actually deployed and how their body is shaped and transformed both in at productive and at the reproductive level. According to Baglioni et al., (2023: 94) elements such as seasonality, weather and the life cycles of plants and animals, are passed over to workers, therefore translating into temporary contracts, causal informal labour and piecework. Moreover, as the agri-food sector relies on seasonal, labor intensive and often involves harsh working conditions, the repercussion of workplace environment and of labour task over workers are a key element to be considered while looking at the interactions between the different spheres of social regime. In the context of the green transition and the increasing expansion of sustainable and organic farming practices, the most obvious labor and health benefits for agricultural workers have been primarily related to the health benefits derived from a reduced exposure to chemical and potentially toxic products, such as fertilizers and pesticides. Conversely, the systematic review of the literature outlined in section 1.3.2. has indicated that these benefits are frequently accompanied by increases in workloads and a diversification of activities with uncertain implications for the health of agricultural workers. Furthermore, it is necessary to reexamine the interconnection between ecology and social reproduction within capitalist labor processes, contemplating their impact on labor both within and beyond the workplace (Baglioni, 2023). The recognition of this interdependence therefore allows us to investigate how the overall growth and industrialization of the agribusiness sector has contributed to transforming labor processes. This has involved increasing labor intensification and the emergence of a flexible workforce, which has become increasingly flexible, underpaid and racialized. Furthermore, this has resulted in specific environmental and landscape consequences, as new forms of societal reproduction have emerged, in which social differentiation continues to determine a hierarchy,

even in being exposed differently to environmental, social and health risks that impact workers' reproductive lives.

5. Adopting an ethnographic approach within workplaces

To analyze the relevance of organic farming within agricultural production and its effects on supply chain dynamics and labour processes, an analysis of the effects of the EU's green transition policy framework would have been sufficient. A deeper investigation into the growth of organic farming could focus on the motivations driving producers into this expanding market and the implications for rural development. However, the perspective and theoretical framework of this study, necessitate a more extensive analysis to capture the interrelations among production, reproduction, circulation, social reproduction and ecology, as well as how these spheres interact with the restructuring of the agri-fruit value chain and the increasing emphasis on sustainable production practices along different levels. Therefore, a qualitative and ethnographic approach appears most suitable for the labour regime theoretical framework adopted, allowing to capture the diverse interactions operating among the four spheres identified by Baglioni et al. (2022), and between the meso-level and micro-level that are at the center of this research. Identifying the interconnected points linking these four different spheres is inherently complex; an ethnographic approach enables the researcher to be more deeply immersed within the reference context, favoring the emergence of critical aspects related to the growth of organic farming and its potential social and relational outcomes.

The decision to adopt this methodology, which necessitates direct engagement - and sometimes participation - in the activities and practices occurring within the research context, arises from the choice of actors and stakeholders chosen for the analysis, especially within the Transformed Littoral Strip. As further explored in subsequent chapters, most workers employed in the fields and greenhouses of the Ragusa Province, are migrants living and working under more or less regulatory conditions, in marginal and isolated contexts, where rules and praxis are daily negotiated primarily by migrant workers themselves in efforts to secure small spaces for resistance and self-determination. Moreover, the spatial continuity that characterizes workspaces and living spaces - particularly within the Transformed Littoral Strip - complicates the separation and analysis of labour conditions as distinct from the rest of farmworkers' lives. Consequently, an ethnographic

and participatory approach, enhances a major valorization and a deeper comprehension of local and contextual dynamics that are essential for the analysis of the data and interviews collected. In such settings, where codes, rules and customs are often opaque, observing dynamics over an extended period is essential for the researcher to establish the researcher to enter into a relationship with the subjects of the investigation and to access the local context.

The choice of adopting an ethnographic approach aligns also with previous research that have inspired more this study, especially the contributions by Giuliana Sanò (2018) and Valeria Piro (2022) whose PhD thesis and subsequent academic contributions analyze the living and working conditions of migrant farmworkers within the Transformed Littoral Strip. Their ethnographic research has revealed how labor organization in Ragusa's greenhouses is closely connected to the priorities and dynamics of global and Mediterranean value chains, often triggering local phenomena that intersect with issue of race, gender and workers' legal status. Consequently, adopting this methodological approach, was a necessary choice, given the geographical and thematic continuity with these contributions, which have not only provided significant insights but also served as benchmarks for the design and methodology of this work. Moreover, as Piro and Sanò conducted most of their fieldwork between 2013 and 2014, returning to the same context after 10 years, and expanding the scope beyond working and living conditions of migrant farmworkers employed in the *plastic factories* (Ibid) of the Ragusa Province, allows also to analyze how the local context and labour market has changed, particularly considering the increased significance of organic agriculture.

Therefore, contributions that have previously focused on the context analyzed in this research has inevitably influenced the methodology adopted, but also the way in which the research questions have been formulated and explored. The aim of this work is to examine how the macro and micro dynamics that influence working conditions and power relations between the different actors and segments of the supply chain are conditioned by the growing focus on greater environmental sustainability. The decision to focus this work on two main segments of the supply chain – production and logistics – allows the researcher to reconstruct the spaces and times of a production system that, although localized, adheres to market-driven logics and dynamics. These requirements continuously reorganize and impose the timing of work within the supply chain, as well as the production spaces, on the labor force. This attempt to connect a macro dimension – related to the overall structure of the value chain, to the reconstruction of the supply chain, and the

analysis of how intermediary processes manifest at each level – with a more subjective dimension aims to examine the choices and actions undertaken by individual participants in the study, their positioning within the supply chain, and the resistance efforts primarily exerted by migrant workers. The ethnographic research conducted therefore seeks to reconstruct the spatial and temporal aspects of these phenomena.

The analysis of the materials was developed along three main thematic axes: the overall organization of the supply chain and how its segments and actors interact, with particular attention to the growing interest in organic production (Chapter 5); the strategies of resistance and mobility developed by migrant workers to counter attempts at control and labor fragmentation within the supply chain, including those implemented by both the workers and migration governance policies (Chapter 6); and the ways in which production processes and labor organization affect the daily lives and reproductive conditions of workers and their families, often irreversibly linking them to the socio-political dynamics and contexts in which the companies operate (Chapter 7). Therefore, adopting an ethnographic approach is primarily motivated by a commitment to placing labor regimes at the core of this study, exploring how this conceptualization is empirically manifested in the dimension of production, social reproduction, circulation and ecology. Indeed, although the initial intention was to focus on the workplaces, with the aim to examine the social dimensions, interactions and organization within workplaces, this ethnographic research subsequently expanded beyond the boundaries of workplace. Looking at Burawoy's (2012) revision of its proposed contribution "Manufacturing Consent" from 1979, in which he reinterprets his ethnographic approach in the light of the most recent debates (e.g. feminist studies, diverging theories on factory regimes, studies on unionism and on the rise of migrant workers), he proposes an extended case method that calls for an observation that is not only limited to the workplace (Burawoy, 2012). Rather, he suggests extending the analysis to the life of workers, to different times and spaces, to include micro and macro factors that can therefore better contribute to extending the theory itself (Ibid). This would then include gender, domestic and reproductive labour, migration regimes and trade unions and even the process of commodification of nature, thus capturing the intersection of the range of transformation that this study aims to analyze.

5.1.Recontextualizing ethnography and gender in non-traditional disciplinary domains

In the appendix of the book "Fresh Fruit, Broken Bodies: Migrant Farmworkers in the United States" (Meltemi, 2023), the anthropologist and medical doctor Seth Holmes, discusses the challenges he faced during the writing process, primarily stemming from the methodological differences between his two fields of expertise: medicine and anthropology. Holmes points out that in the academic field, the medical approach is extremely standardized, typically beginning with a clearly defined research question, followed by a presentation of the data collection methods and concluding with the analysis and discussion of the results. In contrast, his long ethnographic research - aimed at analyzing the pervasive inequalities in migrant farmworkers medical access within the California countryside – places the subjectivity of Mexican farmworkers at the very center of the analysis. On this regard, he argues that while the standardization of research methods and outcomes can be beneficial, even in qualitative contexts, it often necessitates the exclusion of the subjective dimensions of both the phenomena under study and the researcher's position (Ibid: 290). Large part of this research deals with real people, rather than with inanimate objects or mere data points, and with their own biographies - which play a central role in shaping and determining both their migratory, labour mobility and living paths – fostering the interactions and relationships characteristic of ethnographic approaches. However, this fact does not inherently compromise the scientific rigor of the research. From this perspective, this research deals with the same dilemma described by Seth Holmes, as the challenge of articulating the findings in a framework where qualitative and anthropological methods are not the primary reference became apparent. Nonetheless, an ethnographic approach has consistently appeared to be among the most suitable options, given the research objectives and the intention to adopt a comprehensive perspective that encompasses various dimensions beyond mere production and labor.

As Giovanni Semi (2022:19) notes, an ethnographic approach naturally entails a broad research perspective, allowing for the coexistence of different investigative techniques such as interviews, participant observation, and secondary document analysis. In this sense, the analysis of the collected materials and data transcends mere methodology; it becomes "the moment of access to a world that is usually silent, made to speak thanks to the interviewer" (Dal Lago, De Biase, 2002:51). Therefore, when considering an ethnographic approach, the scientific and methodological rigor, are grounded in the researcher's ability to articulate and validate the processes leading to specific observations. This involves presenting, in the clearest and most transparent manner, the pathways and processes that informed the conclusions. Such

considerations necessitate also the inclusion of reflective, almost autobiographical elements in the analysis and presentation of results, which assume analytical significance as the researcher's position is inherently embedded within the field of study. For instance, Sheba George (2005) in her ethnography explores the transformation of gender roles in contemporary migration. As an Indian migrant herself, George discovers that her marital status and her mode of interacting made her "eccentric" in the eyes of many of her interviewees. This experience illustrates how the ethnographic approach requires researchers to first situate themselves within the social milieu they are investigating (Dal Lago, De Biase, 2002).

To give a concrete example in relation to this research, the fact of being a young female researcher in a male-dominated working environment undoubtedly changed behavior and had a significant impact on the gender order, allowing some salient aspects to emerge. Indeed, in the context of this research, gender emerged as a central factor, particularly in the Transformed Littoral Strip, where the agricultural context is predominantly characterized by a strong presence of male workers in the greenhouses and a pronounced sexual division of labor between the greenhouses, where workers are mostly men, and packing warehouses, dominated by women. Furthermore, all the agricultural producers I interviewed, were middle-aged men. Drawing upon the foundational work of Valeria Piro and Giuliana Sanò, who conducted their fieldwork together doing participatory observation inside workplaces of the Transformed Littoral Strip together, I was aware of the need to navigate the gender dimension in a context where I would inevitably be perceived as an outsider, particularly as a young woman. On the other side, since 2013 and 2014, when Sanò and Piro conducted their fieldwork, the number of women employed in agricultural was visibly increased, largely due to the growing Romanian workforce in the local agricultural industry. However, this rise in female employment did not facilitate my entry into workplaces. Indeed, as illustrated in chapter 4 (paragraph 2.2) the quite rigid sexual division of labour has hindered my access to some fieldwork sites. During the interviews I conducted with producers in Sicily, I often asked to work inside the greenhouses to undertake a period of participant observation. When I asked to the manager of the Econatura Group company in Marina di Ragusa – where I have finally conducted my period of participant observation – the response was unexpected as he answered that a company policy, established years prior, prohibited the hiring of women in the greenhouses.

As Mazzei and O'Brien (2009) point out "gaining access and establishing rapport are often dependent on a researcher's ability to first recognize and then strategically work within the socially

constructed meanings that define all her physical and social characteristics deemed relevant by her particular field setting". According to the authors, the contexts and settings in which research is conducted are indeed full of attributes, meanings, and rules that inevitably determine the boundaries and limits of researcher's activity and, most importantly, can influence the actions and reactions of the research subjects. In general, the period of fieldwork, has exposed me to various "risks" linked with the type of relationships I have developed over time with those involved in my research. As many other female researchers who have focused their research interests on labour contexts dominated by men (e.g. Giuliana Sanò and Valeria Piro, but also Martina Lo Cascio who studied migrant labour in the olive value chain in Sicily, or Carlotta Benvegnù who focused on the logistics sector), doing ethnographic research implies approaching men, requesting phone numbers and asking personal questions. Such interactions may lead to misinterpretations that often escape researchers' control. While seeking to immerse myself as much as possible in the research field and within the studied context – by engaging with social spaces as well as workplaces – it has been necessary to constantly renegotiate this participation while simultaneously maintaining a certain distance. This delicate balance has occasionally influenced access to specific information. For instance, in the context of the Transformed Littoral Strip, interviews were intentionally avoided in the homes of male workers, particularly when they lived alone or shared accommodations with other male workers. Therefore, in the case of my research, being a young female researcher has certainly influenced my access to the field, although in different ways depending on the context. Indeed, the feminist literature echoed by Mazzei and O'Brien (West and Zimmerman, 1987; Turnovsky, 2004; Kobayashi, 1994), has focused on how the alignment or misalignment to one gender over another has significant implications in influencing the access to the field. In particular, this strand of research emphasizes how being a woman and the social role that this entails, varies according to the contexts being studied, with different consequences for entering the field and establishing rapport. Researchers then have the chance to actively adopt, reject and renegotiate the roles deemed appropriate for their respective genders in the field.

While being a female researcher has negatively impacted my access to certain work contexts, such as the greenhouses of EcoNatura Group, it has also provided advantages and facilitated access to other areas of inquiry. The gender dimension has allowed me to establish connections with the domestic and familial aspects of work and social reproduction activities, particularly in fostering relationships and accompanying some of the migrant women encountered during my fieldwork.

As discussed in Chapter 7, the attempt by migrant communities and their families to maintain a constant level of control over women would likely not have permitted a male figure to achieve the same results. In contrast, my identity as a woman enabled me to engage in more intimate and domestic relations with the women and agricultural laborers in the Ragusa area. This was facilitated by the contacts and knowledge gained through activities at the Caritas Presidium in Marina di Acate and through interactions with women employed in the packing and processing warehouses.

Another area where being female proved strategically beneficial was in my interactions and interviews with agricultural entrepreneurs and key informants encountered during my research in the Transformed Littoral Strip, as well as in the produce markets. Notably, amongst the interviewed entrepreneurs, with the exception of one female producer from Bologna, all participants were men, many exhibiting a paternalistic attitude towards a young female researcher, who was often perceived rather as a "student." Initially, I feared that the interviewees would feel "judged" in my presence and would be reluctant to reveal significant and contradictory aspects of their positions and beliefs. However, I soon realized that I had miscalculated this dynamic. While I initially found their paternalistic attitude somewhat irksome, I quickly began to strategically encourage it during interviews with producers and throughout periods of participant observation, consistently seeking to elicit noteworthy aspects from our conversations.

6. Genesis and design of the research

The need to recount the history and genealogy of research, the approach adopted, and the way the issue has been addressed is a fundamental aspect of ethnography. This is because the research object and approach inevitably influence field access and the subsequent collection of information and results. It is necessary to clarify the process that led to these aspects being defined over the years.

The decision to delve into the intersection between labor transformations and the socio-economic context of the green transition reflects a renewed general interest in advancing steps towards a more environmentally sustainable future. Beyond the policies and agendas of European institutions, ecological and environmental movements have become increasingly widespread, culminating in the first global climate strike on March 5, 2019. This transnational mobilization

also sparked renewed interest in the ecological potential of certain labor movements. In Italy, one of the most striking examples in recent years is the GKN case, a historic automobile components manufacturer that announced the closure of its Campi Bisenzio plant near Florence in 2021, resulting in the loss of approximately 400 jobs. The struggle of the former GKN workers and their factory collective resonated strongly within both Italian and international movements, creating moments of significant convergence where environmental, labor, and even agrarian sovereignty movements recognized the concept of climate justice as a point of potential conflict and collaboration.

Although many authors (Leonardi, 2023; Andretta et al., 2023) have highlighted the unprecedented prominence of workers in acknowledging the shortcomings of the green economy, the organizational process and mobilization that originated from GKN remain relatively unique within workplaces. The purpose here is not to discredit that mobilization's importance, which has played a critical role in recent Italian political movements. Rather, recalling this event has prompted broader reflections on the relationship between labor transformations and industrial policies initially geared towards green and transition-related objectives. These reflections have remained a backdrop to this research: What dynamics enabled these mobilizations to arise? What factors hindered these mobilizations from gaining similar traction beyond the GKN context?

This research began at a very embryonic stage, considering how the overall framework of the green transition influenced the working conditions of workers involved in production processes. Given the Italian context and agriculture's centrality, the next step was to focus the investigation on this sector. During the first year of the doctoral program, the research advanced through the formulation of an initial rudimentary research question, followed by a review of scientific literature to identify theoretical frameworks and relevant debates. This preliminary work enhanced my understanding of the primary open questions in academic literature concerning the relationship between the green transition and labor transformations, thus enabling an exploration of this relationship in an empirical field that appears to be somewhat underexplored (Guillibert et al., 2021). During this period, part of the research was specifically dedicated to exploring literature on the social consequences of the growth of organic agriculture (Magnano et al., 2024) and conducting exploratory interviews with key informants that facilitated an initial understanding of the sector and its dynamics. For instance, it was decided to limit the research context to industrial agriculture, thereby excluding the realm of peasant agriculture, which adheres more radically to

organic agricultural values (see Chapter 4). Another element emerging from this initial period was the selection of the research field, particularly the decision to focus on two segments of the supply chain: production and logistics. Collaborating with the NaturaSì corporate group, as part of my scholarship, played a crucial role, opening research opportunities that would have otherwise been difficult to access.

6.1. The role of the collaboration with EcorNaturaSì

As part of the scholarship that funded this doctoral project, collaboration with EcorNaturaSì, a leading Italian supermarket chain for organic food distribution, was anticipated from the outset. Founded in 1993, EcorNaturaSì plays a pivotal role in Italy's large-scale distribution sector (see Chapter 5, paragraph 2.1). During initial discussions with Carlo Murer, an agronomist and head of Corporate Social Responsibility at EcorNaturaSì, the company's historical evolution and supply chain structure significantly influenced subsequent research directions.

Firstly, this meeting highlighted the intrinsic connection between the emergence and establishment of organic practices within a market-driven context. While organic values, biodiversity promotion, and environmental sustainability have consistently been central to EcorNaturaSì's philosophy, they have always been balanced with the potential for profit within a rapidly growing market niche since the 1990s.

As elaborated in Chapter 5, another key element shaping the research design and structure was the description of the company's internal supply chain. Two aspects were crucial here: the presence of EcorNaturaSì's major producer and supplier, EcorNatura Group, in the Ragusa province, and the 2020 opening of a specialized logistics hub at Bologna's Interporto. These factors led to focusing the research on these two geographic areas: Bologna—with its produce market and NaturaSì's specialized hub—and Ragusa, a major agro-industrial enclave in the Mediterranean. Although the decision to analyze two levels of the supply chain was independent of EcorNaturaSì collaboration and aimed at examining meso-level relationships between supply chain actors, the partnership provided privileged access, enabling site visits and direct connections with key national organic producers. This included participant observation opportunities in workplaces, such as those within the EcorNaturaGroup packing warehouses.

The initial exploratory period facilitated understanding the roles of certain actors within the supply chain, particularly certification bodies, in defining sectoral dynamics and intermediary

levels. It highlighted transformations within the agri-food sector due to the emergence of specialized chains and supermarkets and the resulting shift in the roles of wholesale markets.

From these initial insights, the research further concentrated on the transformation of agri-food markets amid increasing supply chain verticalization, centralization of control by major retailers and brands, and the rise of supermarket private labels.

In conclusion, what began as a case study with EcorNaturaSì expanded significantly through the exploration of internal company dynamics, allowing the development of a broader investigation. This study framed the development of this supermarket chain within the broader transformation of the organic market and the influence exerted by increasing specialization in organic production and large-scale distribution on the overall organization of the agri-food supply chain. This transformation has altered roles within the supply chain, as seen in the changing importance of produce markets and the creation of new entities like certification bodies.

7. Entering the fieldwork(s) by adopting different strategies

Although the overall qualitative approach adopted—centered on ethnographic and in-depth interviews, field notes, and observations—aligns with ethnographic research, the decision to explore a broad and diverse field of inquiry necessitated the deployment of various techniques and strategies. Three primary approaches can be distinguished.

The first, implemented in the Sicilian context, was notably more "flexible" and pervasive. The permeability of the research environment allowed for greater direct engagement with the subjects of study, as the informal nature of the context and relationships resulted in fewer controls and restrictions. Here, the proximity between workplace and workers' accommodations, alongside the opportunity to engage with local NGOs and trade unions, which primarily provided support services for migrant farmworkers in response to the lack of welfare services provided by local authorities, enabled a more direct and comprehensive engagement with the daily lives of workers. Specifically, the participant observation conducted in the Transformed Littoral Strip has predominantly focused on the activities carried by the Caritas Praesidium of Marina di Acate, which daily offers access to medical and legal services, childcare activities and clothing distribution for migrant farmworkers and their families. The venues of the Praesidium, located in one of the municipalities in the province of Ragusa with the highest concentration of migrant farmworkers employed within the greenhouses, seemed the perfect place where to start the

ethnographic research and conduct a period of participant observation. In accordance with the coordinator of the activities of the Praesidium, I agreed to participate to some of the daily activities they were conducting in support to migrant workers. Initially, my presence consisted of daily exploratory visits, which gradually allowed me to establish relationships with the agricultural workers frequenting the center, as well as their children, many of whom are also employed in their families' businesses. One of the most engaging activities is the distribution of clothing, which takes place every Tuesday afternoon alongside legal support services and medical assistance. I begin to consider this as an excellent entry point for building trusting ongoing relationships with the workers, enabling me to become familiar with their lives without being intrusive. This engagement also highlighted how their working conditions significantly impact various aspects of their lives, including housing conditions, access to services and particularly the geographical isolation that exacerbates existing structural inequalities. The initial period was essential to understand the key dynamics governing the local context, allowing me to enter directly in contact with several migrant workers, and to gain a general understanding of the local context and dynamics. For instance, the activities and initiatives promoted by NGOs and local associations in support of migrant farmworkers that emerged over the years in Southern Italian countrysides are notably shaped by specific regional characteristics. In particular, the relative stability of workers – resulting from ongoing employment in greenhouses – and the absence of large informal settlements, such as those found in other areas (e.g., the province of Foggia in Puglia or Gioia Tauro in Calabria) are striking. Despite the pivotal function of the Caritas presidium in establishing direct channels of communication with agricultural workers, concerns regarding the role of these initiatives in perpetuating dynamics that could result in facilitating conditions of housing isolation or even the exploitation of migrant workers. Indeed, while the activities provided undoubtedly respond to urgent and essential needs migrant workers struggle to respond to in the absence of a support from public authorities, the activities and services implemented by local civic organizations such as Caritas (but also Save the Children, Proxima and many other local and international associations) were finally providing the access to a bare minimum level of services that was eventually ensuring the survival and minimal reproduction of workers at the cheapest costs. On the other side, one of the hypotheses that I started to elaborate – which remain unexplored - is that this minimum level of subsistence, contribute to reduce and almost eliminate the chances of an autonomous organization among migrant farmworkers and their families, and therefore

reduce also migrant collective struggles within the workplaces which were indeed almost absent at the time the fieldwork was conducted.

The second approach adopted is that of the research that focused on the EcoNaturaSì warehouses at the Bologna Interporto and the wholesale markets in Bologna and Padova, where access to the field and workplaces was consistently controlled and mediated by internal actors within the market structures. As these three sites are private, secured by gates or barriers, often monitored by security guards or cameras, access had to be arranged in advance with someone inside the premises. As a result, all visits and research periods within the warehouses had to be coordinated in advance with quality control staff, administrative staff or entrepreneurs and operators active within the market warehouses.

Finally, the last approach adopted for entering the fieldwork was that adopted to enter and conducted a participatory observation within the packaging warehouses of EcorNaturaGroup, where I was employed as a packaging worker for two weeks alongside various Italian and migrant workers. Despite the short duration, this experience allowed me to observe the workflow from within, gain an understanding of the operational dynamics, and interact with groups of workers that I might not have encountered otherwise. However, as detailed in Chapter 6 (Section 3.1), my position within the warehouse presented some challenges, particularly due to my assignment alongside one of the workers, who I later discovered was the aunt of the company's managers. This connection, coupled with the inherently competitive and distrustful nature of relationships among the workers (Sanò, 2018; Piro, 2022), created ambiguity and generated suspicion towards me, resulting in operational reluctance to engage in dialogue or respond to my questions during brief breaks between shifts. In the broader context of my research in Sicily, I had the opportunity to conduct numerous interviews with diverse actors, largely due to my continuous field presence from May to October 2023, which allowed for the cultivation of relational dimensions with many workers. In contrast, my time at EcorNaturaGroup did not afford the same opportunities. Moreover, posing questions and disclosing the intentions of my research often heightened suspicions, especially given my proximity to the manager's aunt, with whom I suspected I was paired intentionally to remain under surveillance. My expectations of conducting in-depth interviews with the workers in the warehouse were therefore unmet. While my participant observation experience was invaluable and significantly enriched my understanding of labor processes—particularly regarding the role of quality certifications in enhancing the recognition of

products and practices—I was unable to conduct any in-depth interviews with the other workers encountered during my tenure at EcorNaturaGroup. In addition to the general distrust, the fast-paced nature of the work and the brief breaks between shifts further limited the possibility of establishing deeper rapport within the short two-week timeframe. This brief period of employment necessitated a more "accelerated" research approach compared to the broader context of my investigation in Sicily, compelling me to engage swiftly in the research before establishing trust with the workers. Given that the primary aim of ethnographic research is to "immerse" oneself in the studied social world, the constrained and limited timeframe within the packing warehouses constituted a significant challenge, exacerbated by the social distance from the actors involved in the research. This limitation, while always present, can be more or less intrusive depending on the individual characteristics of the researcher.

8. Materials: participant observation and in-depth interviews

Between May and October 2023, I conducted a total of five months of field research in the context of the Transformed Littoral Strip, during which I engaged in two primary activities of participant observation. Firstly, I worked as a packing operative at the EcorNaturaGroup warehouses for a period of two weeks. Secondly, I frequently and continuously participated in activities organized by the Caritas Presidium in Marina di Acate, specifically focusing on support for migrant workers and their families.

Research in the wholesale markets of Bologna and Padova, as well as at the logistics platform of EcorNaturaSì in Bologna, was undertaken in a more intermittent manner. Access to these warehouses was primarily for conducting interviews and observing management and labor activities. Throughout all contexts, observations were accompanied by in-depth interviews and informal discussions during participant observation periods, which facilitated the reconstruction of the broader context and the key characteristics of most workers encountered. In total, 48 interviews were conducted, including five preliminary interviews with experts in organic agriculture (e.g., researchers and members of organizations advocating for organic farming). A comprehensive list of the conducted interviews is provided in Appendix 1.

- 2 sustainability managers for supermarket chains (1 from Coop and 1 from EcorNaturaSì)
- Quality control manager at EcorNaturaSì's logistics hub in Bologna
- Quality control manager for horticultural products at EcorNaturaSì

- Marketing director of CAAB (Duccio Caccioni)
- President of CAAB (Marco Marcatili)
- Quality control staff at CAAB
- Former President of the National Labor Inspectorate (Bruno Giordano)
- Activist from the Terre Pulite association (focused on environmental protection in Ragusa)
- 3 staff members from the Caritas Presidium (coordinator, project manager, and legal advisor)
- 2 staff from Casa Valdese in Vittoria (migrants' reception center)
- 1 medical operator from Emergency
- 2 organic producers from Bologna and Padova
- 3 union representatives (ADL Padova; USB Ragusa; CGIL Ragusa)
- 1 logistics operator at CAAB
- 2 warehouse workers employed by a subcontracting cooperative at CAAB
- 2 warehouse workers employed by a subcontracting cooperative at MAAP
- 8 agricultural entrepreneurs from Ragusa Province
- 13 agricultural workers employed in the greenhouses and warehouses in the area.

The interviews with workers were characterized by a strong biographical nature, enabling not only the exploration of aspects directly related to environmental conditions and labor but also the underlying situations from which these issues arise. Conducting participant observation facilitated the development of relational trust with many of the interviewees, allowing for a deeper exploration of significant themes within their narratives. Most of the interviews were recorded according to the availability of the interviewees. In many cases, the workers interviewed preferred to remain anonymous, so the names given are mostly fictious. In some cases, however, wehre workers did not give permission to record the material, voice notes and fieldnotes were used and later transcribed. During the whole period of fieldwork, numerous fieldnotes and reflections made during the fieldwork periods also form an integral part of the fieldwork and materials analyzed. All the materials collected were then analyzed according to the themes identified by the theoretical framework defined in the previous pages, starting from the conceptualisation of the labour regime proposed by Baglioni et al. (2023) and from Tables 1, 2, 3 and 4, which identify some of the main key words for the thematic analysis of the materials.

The multi-level analysis sought to intertwine subjective and individual dimensions—related to labor dynamics and how these processes are organized across the various contexts studied—with the meso-level analysis of the overall supply chain structure and its internal relationships. This synergy emerged comprehensively through the combination of participant observation and in-depth interviews.

In addition to interviews, various qualitative and quantitative data sources were employed, including company documents (such as social balance sheets), reports, and institutional documents. These materials provided insights into how transformations, particularly at the meso-level and in the overall organization of the supply chain, were largely influenced by institutional decisions.

Although access methods varied across contexts, presenting distinct strategies and engagement levels, all approaches were characterized by transparency; I consistently declared my identity as a researcher and the objectives of my inquiry.

The decision to structure the analysis of the materials and, consequently, the thesis framework through the concepts and points defined within the "labor regime" framework developed by Baglioni et al. (2022) and adapted to the context of this research was not made without hesitation, as there were initial concerns that it might compromise the specificity of the individual contexts and cases examined. However, the examined theoretical framework allowed for the maintenance of a dialogical dimension between the two segments of the supply chain considered, the various analytical contexts, and the two levels (meso and micro), which would otherwise have been difficult to preserve in a coherent and comprehensive manner. From this perspective, one limitation has certainly been the asymmetry of the materials collected across the different research contexts. While perfect symmetry among research devices and materials is not essential and often not feasible in the context of participant observation—particularly because access methods do not depend solely on the researcher—the difficulty in obtaining certain information has revealed significant issues within the study context. For instance, during the investigation in the fruit and vegetable markets, the difficulty of identifying the dimension of organic farming, both within the overall organization of the markets and in terms of labor management and work processes, was long regarded as a problem. This issue may not be solely related to the method itself but certainly pertains to the analysis of a context that was likely not directly involved in such transformation. Subsequently, during the analysis of the materials, there was reflection on how the absence of this

organic dimension, along with the general indifference regarding its presence or absence, could indeed confirm the hypothesis of the conventionalization of organic farming and, consequently, its progressive integration into an industrialized supply chain.

The materials collected with the interviews and periods of participant observations were analyzed in light of the frameworks defined in the tables presented in the previous sections of this chapter (Table 1, Table 2, Table 3, Table 4). In line with the framework delineated by Baglioni et al. (2022:89), the analysis has been carried by focusing on the dominant processes (the *What*), and on the pivotal mediating mechanisms (the *How* and the *Where*) which have favored the final understanding of the interrelationship between the four distinct spheres.

Chapter 4. Defining the research context: industrial organic agriculture in Italy

Introduction

Analyzing and precisely defining the nexus between production, circulation, social reproduction, and ecology within the agri-food chain is a complex endeavor. One of the primary issues to underscore is that, unlike other sectors, the agri-food market and supply chain displays a high level of heterogeneity, both in terms of the internal organizational structure of producing companies and the range of potential distribution channels. In the context of organic agriculture, this diversity is particularly pronounced, given that the rapid growth of the sector has led to the proliferation of both private certifications — often integrated within the organized mass distribution chain — and alternative forms of certification and networking. These alternative approaches, such as participatory guarantee systems and agricultural or social cooperatives, aim to ensure traceability and reliability within shorter, local supply chains, often operating outside the mainstream distribution networks. As Perrotta (2017) notes, research in Italy on alternative models of agricultural production has primarily focused on the valorization and heritage of traditional products, which are seen as integral to the identity and culture of a region. Additionally, there has been a growing interest in alternative or civic food networks (Fonte and Cucco, 2015; Giovannini et al., 2023). These networks are frequently associated with experiences linked to social movements, which tend to adopt a more market-oriented approach than those aimed at transforming labour or class relations (Eder, 1993). In view of the diversity within the agricultural sector, it is essential to define the scope of this investigation with precision before delving into its findings. In this regard, Callegari and Valentini (2014) propose a classification of potential configurations of the agri-food supply chain based on spatial relations and interaction types. The first category includes short chains, or "zero-kilometre" chains, which are based on agricultural enterprises that are closely tied to a specific territory. The second category pertains to territory-based chains, led by specific companies that develop local relationships but extend their distribution channels externally. Finally, there are agro-food districts, which are industrial clusters composed of interconnected agricultural and processing companies that collaborate to produce a specific end product. As observed by Martina Lo Cascio (2022:33), the Italian context facilitates

an approach to supply chains as relational spaces, which can be employed to examine specific socio-economic contexts.

In the context of a restructuring global value chain landscape that is increasingly focused on sustainability, with implications for production, trade and distribution, the study of the industrial agri-food chain provides an essential lens to comprehend the transformation of this relational space and analyse the restructuring of the production process beyond the corporate level. Furthermore, labour market restructuring has had an impact on these chains, with an increase in migrant labour and a significant level of fragmentation and standardization along the production processes which have been reframed within green and sustainable paradigms. As Bubbico et al. (2022) observe, these processes of fragmentation have intensified and expanded in recent years, albeit with significant variations depending on the sector, production type, and organizational and institutional context. Consequently, conceptualizing supply chains as relational spaces enables an understanding of the impact of these transformations on the relationships between supply chain actors and on the various forms and processes of labour across different segments of the chain.

This research focuses on the organic fruit and vegetable supply chain, which is highly integrated within an industrial production model. In particular, it analyses the progressive incorporation of organic production into industrial and global structures and logics. It became evident from the initial exploratory interviews, such as that with Lucio Cavazzoni, former president of Alce Nero, one of Italy's pioneering organic companies, that there was a need to clearly define the research field. Cavazzoni, an active proponent of sustainable agricultural practices, identified two notable distinctions within the agricultural sector:

> "The first is the industrial one, which only deals with production, extraction, and has an industrial approach that is destructive to the agricultural world, the other deals with reproduction, with putting the vitality of the agricultural field back into the centre. Here, however, organic farming has become completely industrial and has been absorbed by the world of production and supply chains, and the certifying bodies have also played an important role in the transformation of the supply chains into purely industrial production. The division between the various possible organisations is therefore made first and foremost from here, leave aside the distinction between organic and conventional, the most significant distinction is that between industrial and artisanal, between production and reproduction"

(Interview to Lucio Cavazzoni, 4 marzo 2023, Bologna)

The decision to focus on the industry-based supply chain is partly rooted in the analytical framework that underpins this research. The framework – presented in the previous section – is centred on the concept of labour regime as developed by Baglioni et al. (2022) and aims to integrate the various spheres that are at play within labour regimes, namely production, social reproduction, circulation, and ecology. This allows for an examination of how labour processes and forms evolve in response to supply chain restructuring. In order to analyse the dynamics and processes that have led to the restructuring of agricultural labour within the context of the green transition, it is therefore necessary to situate labour within the broad, interconnected field of industrial production. This necessitates the examination of the agri-food supply chain as a relational space, encompassing not only production but also the interactions across multiple supply chain levels that play a relevant role in the multi-dimensional structure of industrial value chains.

Another factor that has influenced this decision relates to the literature and debates that this research aims to contribute to. The findings are therefore presented in the following chapters, with a focus on three main elements. First, the centrality of migrant labor within the agri-food supply chain. A substantial body of research has focused on agricultural labour by focusing on migrant labour in the fields and greenhouses (Holmes et al., 2023; Décosse and Desalvo, 2017; Moreno Nieto and Hellio, 2017; Piro, 2014), working conditions in packing warehouses (Piro and Sanò, 2017; Gadea Montesinos et al. 2016) or forms of migrant labour in processing (Piro and Sacchetto, 2021) and processing (Lo Cascio and Perrotta, 2022). A comprehensive analysis of the entire supply chain, with a particular focus on the organic sector, enables an investigation into the ways in which the prevailing logic of the agro-industry and the restructuring of the supply chain following the integration of more sustainable approaches shape the work dynamics and the nature of the relational space (Lo Cascio, 2022) agri-industrial logics and the restructuring of the supply chain in response to sustainable approaches influence labor and relational dynamics among its actors.

The other central element of this research is the role of intermediation. As Valeria Piro (2022; Peruzzi, Piro, 2024) suggests, intermediation does not act in a vacuum. Rather, it is part of a system of networks, social, economic and cultural structures that shape and influence the way it is performed at different levels of the supply chain. In this regard, Piro suggests that intermediation

can be considered as "an infrastructure that makes possible and organizes the mobility, the valorization, and more generally, the production and reproduction of the social structures and relations of which intermediation itself is a product" (Ibid: 439). As will be demonstrated in the following pages, the existence of this infrastructure is in fact pivotal to the consolidation of the "caporalato-immigration" binomial, the proliferation of subcontracting practices, and the fragmentation of labour along the supply chain. Simultaneously, it allows to exacerbate discriminatory practices and downward wage competition. Finally, intermediation impacts the relational dynamics of the supply chain by promoting verticalization - thus contributing to transfer of significant costs to producers at the lower levels of the chain. Additionally, it facilitates the standardization of production processes to align with the requirements of organic and sustainable certifications.

The third factor that guided this research to be focused on the industrial-based organic supply chain concerns the role of European policies and their approach to green transition and sustainable agri-food practices. In chapter 1, the discussion addressed how the concept of Just Transition has been integrated, over recent decades, into European policies and strategies, including those in the agri-food sector and a labor market increasingly geared towards sustainability. The increased *mainstreamization* of this approach has been stressed by several authors (Alberdi et al., 2020; Levidow, 2015) who highlight the shortcomings of the European agricultural transition plans, particularly regarding the understimation of an agroecological approach, which remains central within peasant movements and alternative food networks. Given that European policies and strategies for the green transition do not recognize the role played by agroecology, this research decided to exclude peasant movements, and alternative networks from its scope. Although recognizing the innovative practices introduced by many of these rural and alternative networks, these experiences were not included in the scope of this research, except in rare instances where alternative networks and the industrial agri-food supply chain intersected, as observed in some cases in the context of the fruit and vegetable markets of Bologna and Padua.

Finally, as mentioned in Chapter 3 (section 8.1) the direction and scope of this research were further shaped by the collaboration with EcorNaturaSì, Italy's first supermarket chain specializing in the distribution and commercialization of organic products. To this extent, the collaborative period planned from the onset of the doctoral project ran in parallel with field research in Sicily, allowing for an exploration of the dynamics that characterize relationships across various segments

of the supply chain from within the largest organic distribution chain in Italy. The period of participant observation, carried out while working in the warehouses of EcoNatura Group (the main supplier of EcorNaturaSì for fruit and vegetable products), therefore provided a clearer understanding of the role of organic and biodynamic standards and certifications in reinforcing the dominance of leading companies in the sector and shaping labor and production processes.

1. Organic production in Italy and Southeastern Sicily

As outlined in the initial chapter of this study, Italy is a notable European country with a considerable prevalence of organic agricultural practices. Italy has the highest proportion of organic agricultural land in Europe, at 18.2% of its total agricultural area, compared to the European average of 10.1% (Sinab, 2023). Over the past decade, the sector has exhibited notable dynamism. As sales of organic products have increased considerably between 2011 and 2021, reaching a national market value of €4.6 billion (SANA, 2021). The Italian Strategic Plan for the CAP for the period 2023-2027 identifies incentives for the adoption and maintenance of organic practices as the most significant investment in rural development, with an allocation of €2.2 billion. This represents 48% of the total amount allocated to agro-climatic and environmental interventions and approximately 14% of the overall budget for the second pillar of the CAP (European Commission, 2023). As indicated in the "Bio in Figures 2024" report, such initiatives have become a fundamental component of environmental policies within the context of rural development.

In Sicily, support for organic agriculture has expanded since the approval of the 2000-2006 Rural Development Program. According to CREA data (2021), Sicily, along with Calabria and Puglia, hosts over half of Italy's 2.2 million hectares of organic farmland, with the highest concentration of organic operators in the country. Sicily also differs from the rest of Italy in terms of the high percentage of UAA (Utilized Agricultural Area) dedicated to organic farming (30.7%) and the prominence of cereal, olive, and wine production. However, as the organic sector consolidates, it faces increasing internal competition due both to the entry of new businesses and the conversion of existing ones. On the other hand, certain critical issues have also emerged, primarily related to the number of businesses gradually abandoning organic practices, viewing the

incentive mechanisms as a burdensome commitment rather than an opportunity. This issue has, in fact, been one of the triggers for recent farmer protests across Europe, which began in early 2024[33].

Figure 3. Territorial distribution of organic product consumption in Italy

(Source: Sinlab website. Data for 2023)

The organic agriculture sector is therefore undergoing a period of consolidation in response to increasing competitive pressure. This phenomenon can be attributed to the influx of new enterprises into the sector, as well as the total or partial conversion of numerous existing businesses. Concurrently, Pu et al. (2020) have indicated that the expansion of organic agriculture has occurred concurrently with a renewed focus on the quality and safety of food products and processes, resulting in the emergence of credible and reliable alternatives to organic food.

[33] In Italy, recent legislative measures and instruments have actually further promoted the organic sector. A decree for the creation of organic districts and bio-districts was introduced in 2023, while within the PanBio strategy, the National Action Plan for Organic Production, a label for Italian organic products was proposed, aimed at promoting not only environmental sustainability, but also the 'Made in Italy' identity.

However, the CREA report (2021) also identifies a number of challenges, including a concerning phenomenon of businesses exiting the organic system. These businesses are increasingly viewing the incentive mechanism not as an opportunity, but rather as a series of voluntary commitments that further complicate the conditionalities imposed by the new environmental policy. As previously discussed, these issues have been a significant contributing factor to the farmer protests that emerged in various European countries in early 2024. Northern Italian regions have been at the vanguard of the distribution and consumption of organic products, thereby creating a significant consumption gap with the southern regions. Indeed, organic product consumption is concentrated in the northern regions, with 61.4% of sales occurring there, compared to only 12.2% in the south (Figure 3). The results of field research conducted in the Province of Ragusa indicate that the majority of interviewed producers direct the majority of their production towards Northern Italy, allocating a considerable share to foreign markets, particularly France, Germany, and the Netherlands. A significant number of producers attributed this trend to the destagionalization of production cycles related to greenhouse cultivation and the high temperatures characteristic of the Sicilian climate, which permit the implementation of intensive and continuous production cycles throughout the year. Moreover, a considerable proportion of Sicilian agricultural output, particularly from smaller farms, is distributed through cooperatives and producer organizations, which facilitate a diverse product range and guarantee a consistent market presence.

> "We send a lot of what we produce up north. A lot of the organisations and networks of producers here deliver to the fruit and vegetable markets in Parma, Verona, Bologna and Padua. This also comes from a need in Padania, where there's generally less production in winter and farmers there can't do more than a few cabbages in winter. So, the idea is that the organic farm in Sicily who produces tomatoes, fennel and courgettes, together with the one in Calabria who grows oranges and lemons, and the one in Puglia who grows broccoli, allows us to offer a different value. So, in the end, about 15-20% of our product is delivered to Bologna or Parma".
>
> (Interview to organic farmer, Comiso, 24 May 2023).

According to the Bio in Cifre (2024) report, the organic sector is dominated by organized retailers, who account for 65% of the market share. In its 2023 report, ISMEA interprets this trend as an indication of an expanding organic consumer base. Although many regular organic buyers

prefer specialized shops and are therefore willing to pay higher prices to support a sustainable approach to agriculture, large retailers have broadened the accessibility of organic products, attracting a wider public, albeit one that is less loyal to organic values. The dominance of large retailers within the organic market has also had a direct impact on the price dynamics and economic sustainability of producers. This is because large retailers, by virtue of their power within the supply chain, tend to impose prices that may be disadvantageous, especially for small farms that, in order to remain competitive, are forced to accept such conditions, even at the expense of profitability.

> "To make money, we must sell to the large-scale retail trade. I am not happy to work for the large-scale retail trade, but to sell goods we must sell to them because they are the ones who command the sales of all fruit and vegetables, at least in Italy. Then we sell 55-60% of our turnover to France where we do not sell to the large-scale retail trade, but in Italy we supply two or three platforms that then go directly to the large-scale retail trade34. But the organization (in France), at least as far as I know, they are much more organized, there is much more focus on organic. Instead, here (in Italy) organic still concerns a small niche and the supermarkets always impose a frightening price increase, but not on the purchase, on the sale. Because, for example, a tub of aubergines can cost me one euro because it is organic, while in the conventional one they can pay 0.70. But then in the supermarket counters you find 4 euros per kilo for organic and 1.50 for conventional. Why do you create all this margin? People have little purchasing power to buy today"
>
> (Interview to organic producer, Marina di Ragusa, 26 June 2023).

In the context of the Transformed Littoral Strip, organic production has thus been integrated into the territory, partially promoting a shift towards environmentally sustainable and multifunctional agricultural development. According to Anna Cortese (2020), based on the theory of global value chains (Gereffi, 1994; Bair, 2009), certain factors can be identified that have gradually enabled local businesses to develop an agency that has facilitated the emergence of new

[34] As will be seen in the following sections, in recent years the major retailers have developed their own independent distribution and logistics channels, often in parallel with those used by manufacturers or retailers. This development has led to the creation and proliferation of independent, brand-owned platforms where logistics, distribution and the management of relationships with suppliers and end customers are centralised within a single logistics structure.

paths for multifunctional business development. This shift has also encouraged the development of new relationships between businesses and consumers, aimed at greater environmental and social sustainability[35]. In the context of this research, the interviews conducted demonstrated that producers' decisions to convert their production to organic are based on a wide range of heterogeneous factors. In some cases, particularly among the largest and most historically significant companies in the region's industrial production sector, the decision to convert part of their production to organic is driven primarily by the objective of maximizing the revenues given the growth of the European market. This entails a focus on enhancing product quality and innovation in production processes and techniques, with the aim of maximizing profits and expanding the consumer base. From this perspective, the most apparent discrepancies pertain to the scale of the enterprises and the disparate competitive strategies. On the one hand, in continuity with what Arnalte-Alegre and Ortiz-Miranda (2013) suggest, the transition to organic farming has indeed taken on a strategic role for farms, while at the same time entailing higher costs and greater production risks, as well as the need to submit to strict control and sanction systems. On the other hand, as we will see in the next sections, this process has occurred by highlighting contradictions and points of strong continuity between the adoption of organic and sustainable practices and the logics and structures of the industrial supply chain.

> "There was a demand from our customers for a product that was also organic. So we decided to start doing organic production as well, so that we could offer both a conventional and an organic product and thus provide variety. What a company produces ultimately depends mainly on the customers and the type of customers you have."
>
> (Interview to organic producer, Marina di Acate, 25 October, 2023)

[35] To this extent, some authors (Arnalte-Alegre, Ortiz-Miranda, 2013) have also argued that forms of agriculture aimed at promoting greater levels of sustainability and quality are primarily characteristic of European countries that have experiences modernization at a relatively late and partial stage. They argue that these peripheral and marginal contexts are more likely to pursue alternative development paths. This branch of literature has further interpreted the growth of alternative rural development models as a deviation from the vertical integration dynamics of supply chains, where production costs are primarily shifted downwards, first to producers and then to farmers and agricultural workers. According to Moragues-Faus et al. (2013), the proliferation of sustainability-oriented agri-food systems and the increased focus on environmental issues should be seen as a response to these pressures and as an assertion of a new rural development model that addresses the "cost-price squeeze in agriculture and the regulatory treadmill driven by the bureaucratic model" (ibid: 16).

In this case, the competitive strategies adopted by the company and the pressures exerted by its principal purchasers are influencing the production choices, making them increasingly oriented towards higher product quality. In other cases, however, the choice of partially or totally integrating organic practices is more linked to a value dimension linked to both environmental and health considerations:

> "For us, organic was really a radical change that my brother and I wanted, and my father has always supported us. My parents were very close to us on this choice because the first thing in life is food, we live if we eat well, otherwise most of the problems that are widespread today are related to food, to what we eat. So we felt the need to change, and if I want to buy vegetables that I don't produce, I go to the farm I know, otherwise I don't even go to buy the ones that say they are zero kilometre... because those are controlled by whom? By no one! I don't trust the zero kilometre or the little market they have in the village because I don't know who checks them".

(Interview to organic producer, Marina di Ragusa, 27 June 2023)

In this case, moreover, organic farming is associated with a level of healthiness linked to certification and rigorous control processes, capable of guaranteeing food safety that other production and distribution channels cannot. Although certification represents an additional cost for producers, it is therefore also perceived as an element of control that can guarantee higher quality and act as a filter for access and participation in a niche market. As will be discussed in the following chapters, it is precisely this element of control that allows for a reconceptualization of what Marsden (2004) has defined as new spaces for "a new economic and ecological rationality" (Ibid: 3). This also favours a strengthening of structures and institutions that find a new possibility of legitimation in this terrain, which find fertile ground within the Corporate Environmental Food Regime (Friedmann, 2005). It is therefore an *ecological modernization* (Marsden, 2004) in which the transition to more environmentally sustainable practices not only implies a reconceptualization of the relationship between ecology, society and economic development, but also an incorporation of ecology within the institutions of the economy and the tools and mechanisms typical of the neo-liberal market. To this regard, the role of private organic certification and the progressive increase in regulations and guidelines defining organic standards is particularly relevant. These aspects of legitimization and contradiction are not only located in the production phase of the chain, but also

reappear – in partially different forms and with different dynamics – at different levels of the value chain.

2. Agriculture in the Transformed Littoral Strip: greenhouses and packaging warehouses

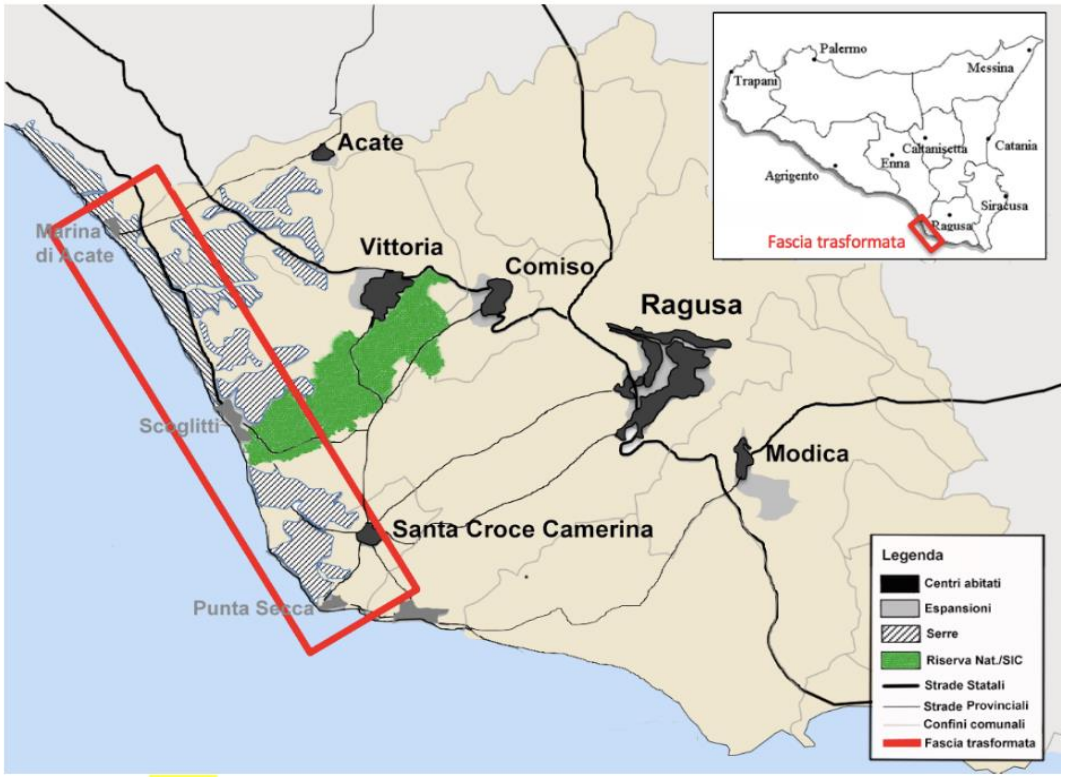
With regard to the level of production and agricultural labour, the field research was conducted in the area of the Transformed Littoral Strip, specifically in the province of Ragusa in south-eastern Sicily. The area, which extends approximately 150 kilometres from Licata in the province of Agrigento to Pachino in the province of Syracuse, derives its name from the transformation of the landscape that occurred because of the gradual spread of greenhouses for the cultivation of vegetables, particularly tomatoes. This process started in the 1950s and has resulted in the widespread distribution of greenhouses throughout the territory (Figure 4). This process of transformation has not only been geographically significant but has also had a notable impact on the socio-economic landscape. It can be seen as part of a wider phenomenon of 'rural cosmopolitanism' (Cid 2008; Popke, 2011), whereby globalization and industrialization have also led to significant changes in rural spaces and societies. The expansion of greenhouse production has thus become a pivotal aspect of the local agricultural sector, with tomatoes remaining the region's primary produce, although other varieties, including peppers, courgettes, aubergines and green beans, have been introduced over time.

The expansion of agricultural areas dedicated to greenhouse cultivation has been remarkable, with a 50-fold increase since 1960[36] (Petino et al., 2022). This technological progress has resulted in enhanced productivity and an increased capacity to safeguard crops from pathogens, thereby enabling uninterrupted production even during the coldest months (Ibid). Indeed, Sicily is the foremost Italian region in terms of the extent of its agricultural area dedicated to greenhouse production. According to data from ISTAT (2020), the cultivated UAA in greenhouses within the Sicilian territory is equivalent to 26.1% of the national greenhouse production (Metes Foundation,

[36] With the Agrarian Reform of the 1950s, the project of making farmers and farm labourers purchase small plots of land to cultivate with greenhouses built with very simple and inexpensive materials: wooden poles, covered with plastic sheeting, began to take root in the Ragusa area. In this context, starting in the 1960s, from the Vittoria area, then towards Santa Croce Camerina, Punta Secca and Scoglitti, stretches of plastic began to develop, increasing the yield of the product up to 6 or 7 times that obtained with the traditional method. If at the beginning of the 1960s greenhouse cultivation barely reached 34 hectares with 2000 workers employed, ten years later it expanded to 2000 hectares and the number of workers employed reached 10 thousand (Gurrieri, 2021)

2020). In the context of the Transformed Littoral Strip, the agriculture of the province of Ragusa is therefore based on a development model founded on the combination of tradition and innovation, with a particular focus on the transformation of products for export to national and international markets. In 2016, the added value of the primary sector in the province represented 8.6% of the national total, placing Ragusa in third place among Italian provinces, with a value four times higher than the national average, according to ISTAT data. The primary agricultural development models in the province of Ragusa are divided between the livestock and dairy sector, which is predominantly located in inland areas, where livestock breeding and meat and milk processing activities are concentrated, and horticultural and floricultural production, commonly referred to as *green gold* (Avola, 2020).

Figure 4. The Transformed Littoral Strip in the Province of Ragusa[37].



[37] Source: Francesco Lo Piccolo, Marco Picone, Vincenzo Todaro (edited by), *Transizioni post metropolitane. Declinazioni locali delle dinamiche post urbane in Sicilia, pag. 293*).

The territory is currently characterized by a notable fragmentation of agricultural land. Most of the active farms possess land holdings of less than 50 hectares, while approximately one-third of the utilised agricultural area (UAA) is under the control of farms with less than 5 hectares (ISTAT). This fragmentation is rooted in the history of the region, which until the 15th century was dominated by vast latifundia belonging to the local nobility.

> "Following the indebtedness of many of the Counts of Modica,' a partner of one of the farms I interviewed during my stay, tells me, 'a form of rent on the basis of foodstuffs called emphyteusis was introduced, which consisted of a form of rent on the basis of foodstuffs that also included the possibility for the farmer to take over the land and become, to all intents and purposes, the owner. In this way, the peasants gradually started to become owners of small pieces of land that they wanted to make cultivable. The first thing they did, therefore, was to 'stone' the land to make it cultivable. The stones that were removed from the land were then used to mark out the boundaries of their properties and so the dry-stone walls, typical of the area around Ragusa, were built. Thus began a process of parcelling out the land, on which farms were often built, which became to all intents and purposes the typical housing structure of the area. A structure consisting of a building, a closed courtyard where mainly summer and winter vegetables were grown, adjacent to the land where animals were kept. With time, the rearing of sheep, pigs, cows and chickens also began to become typical of the area, a stable and flourishing economy based on agriculture was established. These farming families become small entrepreneurs who went on to form the landed bourgeoisie that over time formed the basis of a rural economy based on fruit and vegetable production and livestock farming, mainly cattle. The first greenhouses then emerged during the '1950s"
>
> (Notes from the field diary, Comiso, 24 May, 2023)

This insight was provided by one of the members of a local cooperative during an interview, offering a valuable historical insight into the area. It is evident that agriculture plays a pivotal role in the regional economy, not merely as a primary production sector, but also as a catalyst for a multitude of auxiliary industries. These include processing, trade, transportation, and the provision of essential materials and equipment for the various stages of production.

Most of the workers employed in the area are hired precisely to work inside the greenhouses, where the main activity involves harvesting, cleaning the plants (in Sicilian dialect *brucculiare*)

and providing treatments to protect the plants from pathogens. As we will see in the following sections, this is extremely tiring work, particularly during the summer months when the temperature inside the greenhouses reaches up to 50 degrees. In fact, agriculture inside Sicilian greenhouses is characterized by a high level of deseasonalization of production cycles, which means that farming has a continuous rhythm and therefore does not depend exclusively on seasonal labour. Over time, this characteristic has favoured the long-term stay of migrant workers who can easily work throughout the year. As one of the producers explains, it is the production cycles of the greenhouses that influence the timing and organization of work, as well as the hiring of labour.

Figure 5. View of some greenhouses in the countryside of Marina di Acate.

Photo by Giulia Magnano

Alongside work in the greenhouses, a large proportion of the workers in the area are employed in the processing warehouses. Here, once harvested, the products are sorted and packaged according to customer requirements (Figure 6). In the case of larger companies, processing and transformation activities are often integrated within the same company structure. This choice,

made sustainable and advantageous by the management of high production volumes, allows internalization of activities, reducing operating costs and intermediation levels.

> "We basically have two departments in the company. The warehouse and the fields. The warehouse is the one that processes the fruit and vegetables, which does the packing and handling. There is a labour contract that is specific to the hand packer. Basically [the workers] process the various products, be it the courgette, the date, the cherry, they cut it with scissors and put it in the trays. So, it's a job that is more selective. So, they have the scales, they make all the trays of the different sizes according to the customers' requests...500 grams, rather than one kilo, rather than two. And so, the staff has to be trained. So even there you need some precision, some training".

(Interview with organic farmer. Marina di Ragusa, 25 May 2023)

Figure 6. Women workers employed within the packaging warehouse in a farm in Niscemi.

Photo by Giulia Magnano

2.1. The role of small producers and horizontal integration in the agrifood sector

Within an increasing verticalized agrifood chain, with a strong demand from retailers and consumers for a variety of products in large quantities, one strategy that is frequently employed by companies is to promote horizontal integration to a certain level. This has two main objectives: firstly, to improve the bargaining power of producers, and secondly, to increase efficiency by sharing resources and tools. An example of this can be seen in companies that deliver production within the Ragusa warehouses. In many cases, for example, when companies are unable to bear the costs of processing and packaging individually, they join cooperative or producer organizations, which thus represent a means of aggregation and cost sharing. Smaller companies typically utilize external warehouses for the storage or further processing of products that have undergone an initial summary selection. This enables the horizontal integration of resources amongst producers, facilitating the cooperative marketing of their products.

> "The packaging warehouses in some cases are organizations that are set up spontaneously by – I don't know – 10, 20, 50 producer members who get together and manage a warehouse to which they then entrust the management of the product once they deliver it there. They process it and then sell it. For example, here there is one called Agrologica, where we were also partners in the past. Now there are about forty producers who bring their product there, process it there and then sell it. Both to large Italian retailers and abroad. The producers then sell it to the warehouse, they process it, they select it and follow standards that are imposed by large retailers. So, for instance, within the warehouses they make a selection that leads them to throwing away a lot of products. By the way, in the case of organic, this waste increases even more because organic products cannot be as perfect as conventional […]. Because I say, if you want organic, but you can't expect it to be as perfect as conventional, or if there is a little hole made by an insect you can't expect it to be the same [as conventional]"
>
> (Interview with a member of an organic production cooperative, Comiso, 24 May 2023).

In this case, the interviewed refers to a cooperative that brings together small, local organic producers (30 members and around 40 suppliers) who use and refer to a single packaging

warehouse where only organic products are processed, which necessarily have to follow a separate procedure from conventional products at each stage of the supply chain. As Corrado (2018) points out, associationism among producers is often seen by producers, especially organic ones, as one of the few strategies to influence vertical market integration processes, allowing small farms in particular to gain more freedom while remaining bound by the standardization and adaptation obligations imposed by private certification systems. If, on the one hand, the grouping of producers in the cooperative form allows small companies to increase their power and facilitate the marketing of their production, on the other hand, even for those who produce organically in the cooperative form, relations with large retailers are unavoidable, reproducing the same distortions in terms of prices, also due to the strict aesthetic selection of production. The infrastructural nature of the role of intermediaries is therefore linked not only to the stages and actors directly involved in the relational space of the supply chain, but also to the logics they put into action. From this point of view, it is also the standardization of production and selection processes that reproduces a degree of intermediation in production that is not only limited to the compression of prices, but also to the compression of the volume of production that can be sold in supermarkets, encouraging a high level of food waste in order to meet the minimum requirements in terms of colour and size demanded by large-scale distribution, but also by European regulations[38].

As the following producer suggests, therefore, while participation in cooperatives and consortia facilitates the position of producers, primarily by facilitating access to a wider variety of marketing channels, it may preclude others.

> 'When you are part of a cooperative, of a producer organization (PO), it is the PO that issues the invoice to the end customer. So if you are part of a PO you still have an intermediary who does his own business, who decides who to sell the goods to, how much to sell them for. And this slows you down even if you want to make direct sales, because if you get the order in the evening for the morning then you cannot sell those goods directly to the customer. So maybe it

[38] As Stefano Liberti and Fabio Ciconte point out in their report 'Siamo alla Frutta' (Earth Association, 2020), EU Regulation 428/2019 sets out the criteria for marketing fruit and vegetables in great detail. While initially the rules were intended to ensure the marketing of healthy, whole, clean and pest-free produce, the dictates defined within the regulation leave little room for interpretation by defining extremely detailed criteria for skin colour, product diameter and weight in general. According to the ISMEA report on the competitiveness of the Italian citrus fruit supply chain, for example, 30% of the citrus fruits produced do not find an outlet within the traditional markets, being redirected to the processing industry where, however, the price differential barely manages to cover the cost of production.

precludes you from avenues that may be more profitable because you are dealing with an intermediary anyway.'

(Interview to organic producer, Marina di Acate, 28 June, 2023)

It is therefore an intermediation that does not act in a homogeneous way, and which mainly affects smaller producers, who are necessarily forced to go through warehouses or producer organizations to facilitate the marketing of their production. As highlighted by Lo Cascio and Perrotta (2022), the relationships between manufacturers and farmers are often organized through producers' organizations, which are formally supposed to represent the interests of farmers. However, given their intermediary character, such actors frequently favour manufacturing companies, often integrating the visions and strategies of retailers. Therefore, farmers usually have no choice but to join a PO, but they often see POs as counterparts in the commodity system, especially when they conclude exclusive agreements to sell their products to one single retailer, as this significantly increases the dependence of the producers on the PO, which in turn depends on the decisions and priorities of the single retailer to which they sell. While producers' organizations represent a degree of intermediation and, therefore, a further reduction in producers' earnings, some entrepreneurs nevertheless emphasized the opportunities deriving from an aggregation system such as that of cooperatives and cooperatives, which allows small producers to increase their bargaining power with distribution brands.

"Unfortunately, the small producer...because we have to understand that we all have to be united, because in my opinion one of the weaknesses we have, especially here in Sicily, is precisely this, we are too disaggregated. In Marina di Ragusa we are 8 or 9 companies that do organic farming. In Marina we are 2800 inhabitants in winter...and the whole of Sicily should be a single cooperative, a single consortium. At that point we would have a lot of power over prices...instead now the large retailers and big costumers, by now they want the price list on Fridays, by 4pm they want all the price lists for the week of all the goods. On Monday morning, the one (the big retail customer) looks at the prices. "You put the aubergine at one euro, one guy put it to me at 90, then 85, the other one at 95, if I have to take it then I'll take it from the one who makes it for me at 85"...then I'll make it for you at 80 cents, understand? Without realizing that we are harming each other who are here. I think that if we could all be...each also working in his warehouse, but with one voice. 'Listen, but the aubergine, or the

tomato, is one euro, that one is 2 euros, that one is 1.50 euros, either at my place or yours the price is the same'. Then we would have more say".

(Interview with organic producer, Marina di Ragusa, 27 June, 2023).

In this case, the producer interviewed, in addition to pointing out the consequences of such a verticalized supply chain, denounced the limits of the fragmentation observed first and foremost at the production level.

According to the 2016 Nomisma report on the competitiveness of the Italian fruit and vegetable sector, for the fruit and vegetable sector, Sicily is the first region for the number of active producer organizations (55), followed by Lazio (42) and Puglia (32) (Nomisma, 2016). However, the high presence of organized structures at a regional level does not necessarily represent a positive element, since the added value of horizontal integration derives more from the quality and rates of production organization that these organizational structures are able to express, rather than on the quantity of these organizations (Ibid).

2.2. Division of labour within the Transformed Littoral Strip

Although the agricultural sector represents the main source of employment in the Ragusa context, the distribution of the workforce in the greenhouses and warehouses is rigidly divided along gender lines. Moreover, it is often the wives of the workers in the greenhouses who are employed along the processing lines in the warehouses. During the field research, this sexual division of labour, which dominates within all companies, was also an obstacle to the field work. In fact, as I wanted to carry out a period of participant observation inside the greenhouses of a large organic company in the Ragusa region - as well as the main supplier of fruit and vegetables for NaturaSì - during the research period in Ragusa, I approached the owner of the company to be hired as a worker inside the greenhouses.

"Today Stefano finally confirmed to me that they would be able to hire me for a period of work within the company. The conversation on the phone, however, took an unexpected turn. He explained to me that the administration colleagues he spoke to reminded him of a company rule that has been applied for a few years and which stipulates that women are not allowed to work inside the greenhouses. This surprised me, on the one hand because it seemed unlikely

that he was not aware of this rule before, and on the other hand because I did not believe that this division was so clear-cut. ‘We have many employees who have been with us for many years and who have often proposed to us that their wives work in the greenhouses,' he told me during the phone call, ’but we have always refused to avoid any kind of problem. I'm sorry, but we don't want to set a precedent'. However, he proposed me to work in the packing warehouses, where work should start again around mid-November, and of course I accepted'.”.

(Notes from the fieldwork diary, Vittoria, 12 October 2023)

As highlighted by several studies that have already focused on the study of labor within packing warehouses (Sanò, 2018:103; Gadea Montesinos et al., 2016; Hellio, 2014), in the local division of agricultural labor, it is common to observe the use of cultural constructs and representations aimed primarily at reinforcing gender distinctions in workplaces. One of the main reasons behind this differentiation relates to women supposed greater aptitude for product selection, processing, and packaging work, which requires a certain degree of care and precision. On the other hand, as explained by one of the producers from a large local agricultural company, men's bodies, being stronger and more resilient, are better suited to withstand the heat and labor involved in working in greenhouses.

“We also have warehouses where we do the packaging. In the warehouses where the product needs to be sorted, let’s say women are more suitable because they have more patience than men. Women have patience, while men need physical activity, like moving crates…some of them manage, but 90% [of the work done inside the warehouses] isn’t really men’s work. So, there are far more women than men in the warehouses. There are also women in the greenhouses, but mainly men. And then the working hours are also different. In the warehouse, there’s a different kind of schedule, and women don’t want to work in the greenhouses because it’s 45 degrees. So, we have workers in the greenhouse, but we also have workers in the warehouse, and we try to assign them where they prefer, so they work better.”

(Interview with a large agricultural producer. Niscemi, May 31, 2023)

At a macro level, this preliminary overview of the production district in the province of Ragusa, highlights two fundamental aspects to considered, both in terms of production and in the

processing and transformation of horticultural products. The first concerns the distinction between small and large companies, while the second pertains to the differentiation between the organic and conventional supply chains. It is therefore worth noting that the distinction between small-to-medium and large enterprises allows certain levels of intermediation, described in previous sections, to be circumvented. As noted by Omar and Thorsoe (2023), a significant aspect of this power imbalance lies in the greater bargaining power of large companies and the lack of information, expertise, and resources available among small producers, who struggle to compete with larger companies in the area. This imbalance has consequently fostered the emergence of actors and processes that establish intermediations, supplying services, expertise, and contacts through various methods and tools (Howells, 2006), thereby promoting a certain degree of innovation and coordination even among smaller producers. The structure of the supply chain imposes a range of requirements related to the need for coordination, information sharing, and engagement in innovative processes that can enhance risk management capabilities and production quality (Dicecca et al., 2016). These are complex challenges, particularly for small businesses, for whom the costs associated with meeting these requirements can be prohibitively high.

3. The role of fruit and vegetable markets

Fruit and vegetable markets have been for a long time the fundamental backbone of the national and international agricultural system. In most cases, they are organizations, often public or with a public majority, that manage and control the distribution and marketing of fruit and vegetables. Following the processing and packaging phase, producers in the province of Ragusa generally deliver their products to the Vittoria market, the largest in the area, or to other local markets, including those in Santa Croce Camerina, Marina di Ragusa, Comiso, or Donnafugata. Subsequently, the goods are delivered by companies to either be purchased directly by buyers or transferred to redistribution markets (such as those in Bologna and Padua), located in other parts of the country. In these redistribution markets, traders and retailers purchase the goods for sale in local stores or for export abroad. A fundamental distinction among markets can be made based on the types of markets themselves, which can be classified as follows: production markets, redistribution markets, and terminal markets (Table 5). As Duccio Caccioni, Marketing and Quality Director at the Bologna Agro-Food Center (CAAB), elucidates, these three categories differ in their roles and functions within the distribution chain.

"There are three types of markets: the production market, like the one in Vittoria; redistribution markets, like the one in Bologna; and then there are terminal markets, like those in Rome or Milan, which are large markets but do not redistribute to other markets. They only supply operators, small and medium retailers, or even large traders in a large metropolitan area. So, what production markets do is wait for the harvest, for the first batches of tomatoes picked from the greenhouses to arrive, and then (in the markets) they start working around 10 in the morning. After that, the intermediaries move in… who then sell to the final clients or to other traders in redistribution markets".

(Interview to Duccio Caccioni, Bologna, 11 January, 2024)

Table 5. Types of markets in Italian agri-food value chain among the markets that are part of the network Italmercati

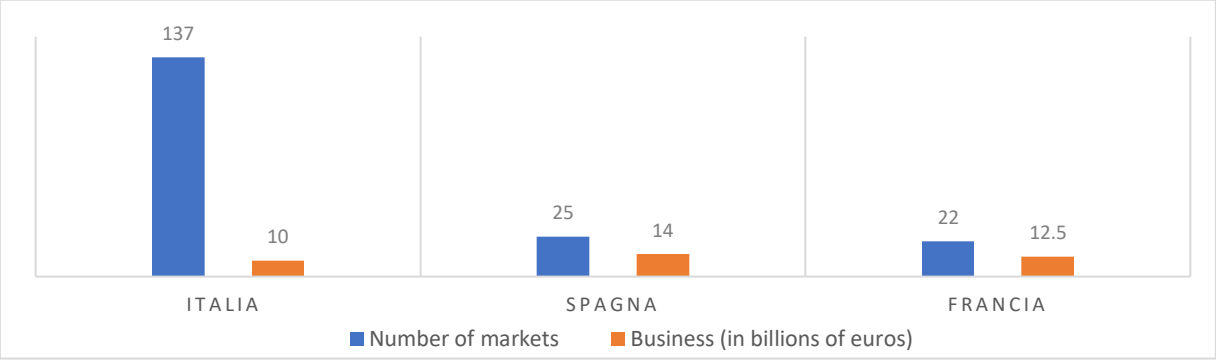
Production markets	Redistribution markets
• MOF - Centro Agroalimentare di Fondi S.C.P.A. • Veronamercato S.P.A. (Verona) • COAGRI - Mercato Ortofrutticolo della Sardegna Soc. Coop • COMALCA - Consorzio Mercato Agroalimentare Calabria S.C.R.L. (Catanzaro)	• CAAB - Centro AgroAlimentare di Bologna (supplier to large consumers) • MERCAFIR S.C.P.A. (Florence) • Veronamercato S.P.A. (Verona) • SGM - Società Gestione Mercato (Genova) • MAAP - Mercato Agroalimentare di Padova • CAAT - Centro Agroalimentare di Torino • CAAP - Centro Agroalimentare Piceno S.P.A. • NORDEST MERCATI - Centro Agroalimentare Treviso S.R.L. • CAL - Mercato Agroalimentare di Parma S.R.L. • Bergamo Mercati S.P.A. • CAAR - Mercato Agroalimentari di Rimini S.P.A. • SO.GE.MI - Mercati Agroalimentari S.P.A. (Milano) • COAGRI - Mercato Ortofrutticolo della Sardegna Soc. Coop • FOR - Filiera Ortofrutticola Romagnola S.P.A. (Cesena) • MAAS - Mercati Agroalimentari Sicilia S.C.P.A. (Catania) • CAAN - Centro Agro-Alimentare di Napoli S.C.P.A.
Terminal markets	**Export markets**
• CAR - Centro Agroalimentare ROMA S.C.P.A. • MERCAFIR S.C.P.A. (Florence)	• Veronamercato S.P.A. (Verona)

• Veronamercato S.P.A. (Verona) • CAAT - Centro Agroalimentare di Torino • CAAP - Centro Agroalimentare Piceno S.P.A. • NORDEST MERCATI - Centro Agroalimentare Treviso S.R.L. • CAL - Mercato Agroalimentare di Parma S.R.L. • Bergamo Mercati S.P.A. • CAAR - Mercato Agroalimentari di Rimini S.P.A. • SO.GE.MI - Mercati Agroalimentari S.P.A. (Milano) • COMALCA - Consorzio Mercato Agroalimentare Calabria S.C.R.L. (Catanzaro) • CAAN - Centro Agro-Alimentare di Napoli S.C.P.A.	• NORDEST MERCATI - Centro Agroalimentare Treviso S.R.L. • SGM - Società Gestione Mercato (Genova) • MAAP - Mercato Agroalimentare di Padova

(Source: ISMEA/Italmercati Report, 2024)

A survey conducted by the ANDMI (National Association of Wholesale Market Directors) revealed that Italy has a total of 222 market structures, comprising 137 fruit and vegetable markets, 58 fish markets, 19 flower and ornamental plant markets, and 11 poultry and meat markets. The number of these facilities serves to illustrate the continued central role that markets play within the value chain, particularly in the fruit and vegetable and floriculture sectors. However, according to the 2023 Position Paper published by ItalMercati, the sector remains highly fragmented. This is evidenced by the fact that the number of Italian markets is approximately six times that of Spain, which has only 25 markets, and France, which has 22, despite significantly higher turnover (Figure 7).

Figure 7. Number of wholesales agri-food markets in Italy, Spain and France and relative business (expressed in absolute values and billions of euros) in 2023.



(Source: elaboration of the European House, 2023)

In May 2024, following the emergence of tensions between European farmers and other stakeholders in the agricultural and food market between 2023 and 2024, the ISMEA (Institute of Services for the Agricultural and Food Market) and the ItalMercati business network published a report. The objective of the report was to analyze some of the most critical issues related to competitiveness, transparency, and fairness within the supply chain, with particular attention to farmers' participation. The report initially identifies the economic impact of the agri-food sector (Table 10). In a strict sense, the agri-food sector contributes 4.1% to Italy's national GDP. Considering the entire supply chain, including distribution and catering, this contribution rises to 7.7%. When logistics, transportation, and intermediation services are included, the figure reaches 15.2%. In this context, the sectors generating the most added value is the trade of "other food products," including fish and shellfish (25.1%), and fresh or preserved fruit and vegetables (24%), which accounts for almost a third of those employed in wholesale markets. Consequently, the fruit and vegetable sector represent the primary supply chain in wholesale markets, with approximately half of the total production passing through this channel and employing the highest percentage of workers (30.10%).

Table 6. % weight of each activity in value added, turnover and employment in wholesale of food, beverages and tobacco

Economic activity	Value added at factor cost	Revenue	Employed
Wholesale trade of other food products, including fish, shellfish and molluscs	25,10%	23,60%	21,10%
Wholesale trade of beverages	11,20%	8,20%	12,20%
Wholesale trade of coffe, tee, cacao, spices	2,00%	1,20%	4,30%
Wholesale trade of meet and meet products	6,30%	7,30%	7,20%
Wholesale trade of fresh and conserved fruit and vegetables	24,70%	23,30%	30,10%
Wholesale trade of tobacco and tobacco products	3,00%	4,20%	0,70%
Wholesale trade of diary products, eggs, oil and edible greases	7,50%	9,10%	7,20%

Wholesale trade of sugar, chocolate, sweets	3,60%	2,80%	6,10%
Non-specialized wholesale trade of food products, beverages, tobacco	16,60%	20,30%	11,20%

Source: Report from ItalMercati, 2024

This research focus on the fruit and vegetable markets of Bologna and Padua, which occupy a pivotal position within the Italian context. In both cases, these are redistribution markets with a particular focus on the marketing of fruit and vegetable products, primarily sourced from southern Italian regions. The CAAB is a primary wholesale distribution centre for fruit and vegetables in Italy, serving as a 'point of reference in the national and European agri-food panorama' (CAAB website). This is due in part to Emilia-Romagna's status as one of the Italian territories with the most developed and historically rooted agri-food industry. The market is home to approximately one hundred companies engaged in the marketing of fruit and vegetables, including organic products. On the other side the MAAP has an important role especially given its importance in the trade with Eastern European Countries, for which is the leader among Italian wholesale markets.

Additionally, MAAP specializes in the marketing of fruit and vegetables, and is one of the most significant markets for the exportation of products abroad, particularly to Eastern European countries. The rationale behind the selection of these two markets for research is also linked to their involvement in green transition projects financed under the PNRR. These projects aim to facilitate the restructuring and integration of transition and environmental sustainability aspects within wholesale market structures. In particular, the Ministerial Decree of 5 August 2022 saw the Ministry of Agricultural Policy earmark €150 million to provide financial support for investment projects with the objective of modernizing and restructuring markets, as well as improving their logistical capacity. Of the 22 markets that are members of the Italmercati network, 19 have applied for funding and 14 of the applicants - including the markets of Bologna and Padua - have received funding to finance projects aimed at reducing environmental impact and promoting energy transition (for 113 million euros) and promoting the digitization of activities and the adoption of digital solutions (for 69 million euros) within market structures and logistics operations. From this point of view, the focus on these two markets allows not only to analyze the way in which organic products are incorporated into the different stages of the supply chain, beyond the purely

productive stage, but also to explore the way in which green transition policies are integrated into the industrial logistics associated with the marketing and distribution of fruit and vegetables.

Chapter 5. Pieces of Green Transition along the supply chain: between contradictions and limits

Introduction

According to Baglioni et al. (2022:83), "circulation is a process that precedes production through the distribution of the means of production, follows it through the distribution of commodities, and encompasses the moment of exchange, when surplus value is realized as profit in the money form". Considering the context of the agri-food supply chain, central to this sphere are therefore the wholesalers, the commercial capitalists, including the large corporations that dominate within the supply chain and the producers. On the other hand, the boundaries between production and circulation are not always fixed and determined, especially since circulation can also be influenced by processes of surplus value and appropriation through financial or market instruments. In order to understand and unpack the interweaving points between the dimensions of circulation (C) and production (P), and therefore capture how farmers, traders' intermediaries and labour contractors organize the labour process along the chain and how does this organization interact with the transformations of the agri-food value chain explored in Chapter 1, this chapter will move around three main questions:

Recalling the schematic representation of this framework provided in Chapter 3 (Table 2), three main key points have been identified for analyzing how the circulation of goods within the supply chain is organized within the labour regime:

- Who controls production and how?
- What is the main form of division of labour among employers and firms?
- How credit and debt relations interact with labour processes and workers' lives?

In this chapter, we will therefore try to answer these questions by presenting the context in which this research took place, and in particular by showing how intermediation plays a fundamental role in shaping the relationships between the different actors and levels of the supply chain and the circulation of goods.

This chapter aims to analyze the structure of the industrial organic supply chain at the meso-level. In doing so, it will examine how the relationships between actors and the different levels of

the supply chain have changed as a result of the process of globalization and transnationalization of value chains. It will also consider how this process has been influenced by the emergence and affirmation of the corporate environmental regime (Friedmann, 2005).

The initial section of the chapter delineates the disparate levels of the supply chain and the principal actors involved, based on data and interviews gathered during the field research period conducted within the markets and in the transformed coastal strip of the province of Ragusa. In particular, the role of intermediation is analyzed, which often gives rise to forms of control and power relations between the actors of the supply chain. Subsequently, the chapter delineates the alterations in intermediation practices resulting from the emergence of new actors, who have assumed a pivotal role, particularly with the advent of large-scale distribution as the primary element of governance within the supply chain.

The second part of the chapter shifts its attention to fruit and vegetable markets, which were previously the focal point of intermediation. These markets have gradually lost their influence due to the emergence of autonomous logistics platforms that are directly controlled by large-scale distribution. This section also presents the core elements that emerged from the fieldwork at CAAB and MAAP, with a particular focus on their role in relation to the other levels of the value chain.

The third section focuses on the interaction between the value chain, the movement of goods and workers, and green transition policies and measures. This process has resulted in two key developments. Firstly, industrial conversion plans and major restructuring projects have been gradually integrated into the logistics sector. Secondly, new actors and private regulatory bodies have emerged, redefining the distribution of value among the different actors in the supply chain.

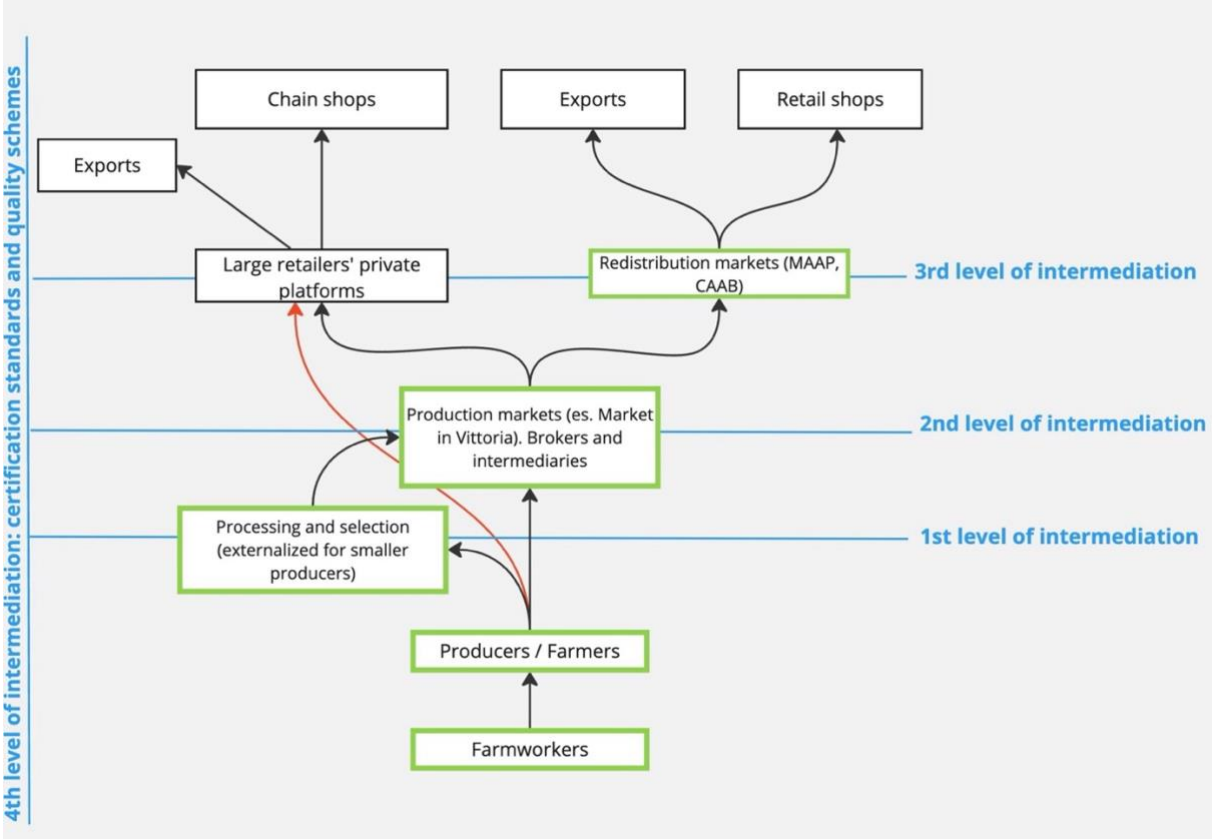
The final section seeks to address some of the key questions, drawing on the analytical framework developed by Baglioni et al. (2022) for labour regime analysis. In particular, it will examine the points of connection between the spheres of circulation and ecology, elucidating how these interactions impact labour regimes and the balances between actors operating in the supply chain.

1. The role of intermediation along agri-food value chain

The supply chain is defined as the set of processes involving different stages and actors, from the production of raw materials to their final consumption. From this point of view, one of the first authors to introduce the concept of the agri-food chain was Louis Malassis (1983), who for the first time went beyond the traditional sectoral analysis and conceived the production chain as an integrated system of production, distribution and exchange relations, mainly linked to the international division of labour. As Gereffi (2018) points out, the analysis of the industrial chain also makes it possible to identify the processes that have reinforced the power asymmetries resulting from the growing role of large multinational companies. Indeed, supply chains are characterized by power relations that are reproduced at all levels and that significantly condition the relations between actors and firms within each production segment. Figure 9 reconstructs the main points of the industrial agri-food chain analyzed during this research, focusing in particular on the fruit and vegetable chain and the main intermediary points. The first level of intermediation is represented by the processing and packaging operations, where products are sorted and processed in warehouses according to the specific requirements of the buyer. This is a process that particularly concerns agricultural holdings, which generally do not integrate processing operations into the production cycle, but rather rely on intermediaries - often represented by cooperatives or agricultural consortia - for some processing.

A second level of intermediation concerns production markets, located in the main agricultural production areas, where producers deliver goods that are then bought by brokers or commission agents to be resold later. This level of intermediation also mainly concerns small and medium-sized producers. In fact, with the industrialization of the supply chain and its progressive restructuring, many of the operators interviewed have observed that large-scale organized distribution tends to bypass these intermediaries, preferring to make direct agreements with producers and to receive supplies directly in their logistics platforms, often imposing economic conditions that are not very advantageous for the farms. As we will see in the course of this chapter, the emergence of private platforms managed directly by individual distribution chains has contributed to restructuring the dynamics of the supply chain, reinforcing the process of verticalization in favour of large-scale distribution - and marginalizing the role of fruit and vegetable markets, which are now mainly used to supply retailers and small supermarkets.

Figure 8. Schematic representation of the horticultural production chain highlighting the main levels of intermediation



Source: elaboration of the author.

A third level of intermediation is that of redistribution markets, where goods are purchased by additional intermediaries, such as commission agents or cooperative representatives, to be resold abroad or to final consumers and buyers. Finally, the fourth level of intermediation, transversal to the entire supply chain, is represented by organic and quality certification, which act as instruments of regulation and standardization of production. These processes create what Loconto and Busch (2010) define as a "tripartite standard regime", which helps to consolidate the power of large-scale organized distribution in promoting production standards and, consequently, in controlling the rules of the supply chain. The green boxes (Figure 8) highlight the contexts in which the empirical research was carried out, examining different levels of the supply chain: from the pure production phase to the processing and transformation phase in the transformed Littoral Strip in south-eastern

Sicily, to the production markets, to the redistribution markets (fruit and vegetable markets in Bologna and Padua).

Therefore, starting from the diagram (Figure 8) illustrating the main segments of the fruit and vegetable supply chain, this chapter aims to analyze the points of intersection between the spheres of circulation and ecology in the context of agricultural production in the Ragusa region and fruit and vegetable markets. In particular, this chapter aims to analyze how environmental and ecological elements play a central role in the organization of supply chain relations and in the consolidation of verticalization and fragmentation processes, in continuity with the dynamics and logics underlying the Corporate Environmental Food Regime (Friedmann, 2005).

1.1. Intermediation in fruit and vegetable markets: the Vittoria market[39]

Several contributions have analyzed the forms and processes of work in food processing and transformation warehouses (Piro and Sacchetto, 2021; 2020; Lo Cascio and Perrotta, 2022). In this context, it has been particularly highlighted how the relationship between retailers and producers shows how the former are able to bring about changes in the production process of the factories, to guarantee greater flexibility in shifts and work in order to meet the just-in-time demands of the supermarkets (Lo Cascio, Perrotta, 2022). From this point of view, it is crucial to consider the role of fruit and vegetable markets as the main places where intermediation, but above all negotiation and therefore price fixing, takes place. In fact, it is in the markets that the initial price of the products, set by the commissioners, is determined, which has a direct impact on the producer's profit. Agri-food markets are in fact the meeting point between supply and demand for fresh produce and the main link between the primary sector, distribution and the catering industry, which creates various tensions between the actors involved in this process. Wholesale markets are one of the main venues for intermediation and, according to the ItalMercati and Ismea report (2024), there are about 84,000 intermediary companies in Italy operating in the wholesale sector, linking different actors (producers and buyers) in the supply chain, often located in different places and

[39] The central role of fruit and vegetable markets as intermediaries between the various players in the supply chain, where money turnover is significant, has resulted in these markets becoming a context within which criminal organization, particularly the mafia, have established their businesses. This has resulted in the capacity for mafias to exert influence and control over one of the initial stages of the supply chain, following production. As posited by Omizzolo (2021), this influence has also led to an augmented utilization of illicit labour, the proliferation of fraud against public and community funds and institutions, and an intensified prevalence of money laundering activities.

contexts (especially southern producers with northern buyers)[40]. The large number of actors present at the various stages of the agri-food chain thus determines a competitive and heterogeneous structure which, in the same Ismea report (2023), is represented by an asymmetrical hourglass, with consumers on one side and farms on the other. Figure 9 thus very effectively illustrates the weakness of the bargaining power of many farmers vis-à-vis entrepreneurs who provide and supply services or inputs, as well as vis-à-vis final consumers.

Figure 9. Structure of the Italian agri-food supply chain

(Source: Ismea and Italmercati report. Elaboration on Istat and Unioncamere data)

[40] In the initial months of 2024, ISMEA conducted an ad hoc survey of 80 agricultural enterprises that declared that they were engaged in the sale of all or part of their output to commercial intermediaries, including those operating in wholesale markets or agri-food centres. With regard to the intermediaries utilised, 34% are wholesalers with sales premises at markets, 23% are wholesalers without sales premises, and 43% are intermediaries. The reliability and reputation of the operator were identified as the primary factors influencing the selection of an intermediary or wholesaler by 79% of the companies interviewed. Furthermore, 54% of respondents indicated that the primary service provided by intermediaries is transportation to processing centres, 29% cited collection and packaging of products, and 16% identified the provision of seeds, seedlings, or other technical resources (Italmercati Report, 2024; 30).

The role of intermediaries and wholesalers that link actors at different levels of the supply chain should also be considered. Within the fruit and vegetable markets, one of the first levels of intermediation is thus established, represented by the commissioners. This intermediation takes place both in the production markets and in the redistribution markets, where the goods, after being purchased by brokers and wholesalers, arrive to be resold to retailers or large-scale distributors. In fact, when the producer delivers the goods within production markets such as the one in Vittoria, the products are sold to brokers - also called commissioners - who manage the boxes within the markets, where the goods from the various producers are brought together and stored to then be sent to the redistribution markets or directly to the buyers.

> "The broker is a very important figure and should serve the interests of the farmer. The principle behind this figure was in fact that the farmer would entrust the goods to the steward in order to value them, to sell them at the highest price. In fact, the steward earns on the percentage of the sale and the higher the price at the sale, the higher the percentage that the steward also keeps in his pocket and, ultimately, the farmer's profit also grows".
>
> (Interview to agri-food producer, Marina di Acate, 23rd July, 2023)

On the other hand, many of the manufacturers interviewed emphasized that these levels of intermediation tend to significantly disadvantage smaller companies, which find it more difficult to conclude agreements directly with customers and are often forced to go through these intermediary channels in order to find commercial outlets. In some cases, however, awareness of the disadvantages of intermediary channels leads manufacturers to develop strategies to minimize the costs of intermediation.

> "On a commercial level, I started by taking the stuff to the fruit and vegetable market in Vittoria. But of course, everything depends on the intermediaries...because the more intermediaries there are, the lower the selling price, and therefore the less profit I can make. Sometimes I have even experienced losses. So, I would sell below cost. If it cost me one euro to produce cherries, I would sometimes sell at 80, 90, 70 cents because the market works according to supply and demand. If there is too much supply on the market, the price inevitably drops. If you add that you also to count that there is the intermediation of the broker, the wholesaler, the warehouse, the market, the big

> distributor... and that you must eat from that price…you understand that this often happens. And so, to try to free myself from these low prices, slowly over time I looked for alternatives. That is, I found customers...so for example I managed to get out of the fruit and vegetable market in Vittoria, I no longer bring my products there, and I prefer to bring them directly to the market in Bari or to the market in Syracuse. By doing this I avoid some steps, and maybe these markets...these dealers in Bari and Syracuse used to buy at the market in Vittoria. In this way I save the 10% that the brokers in the Vittoria market used to take. And you understand that on a turnover of 150 thousand euro a year, if you save the 10%, is 11 thousand euro, so is a lot. I also tried to develop direct sales. So, if there are small customers who want to order a cassette, two cassettes, surely if I make 90 the price they give in Vittoria, 100 the price they might give me in Bari and Syracuse, and 200 what I find in supermarkets, I can sell them directly to customers for say 180. A nice margin, even if they are small quantities. And this extra money also allows you to make the workers feel better, to buy them masks and filters when they do the treatments [...]
>
> (Interview with organic producer, Marina di Acate, 28 June 2023)

However, as explained by several producers interviewed during the research period in Vittoria, and also revealed by previous research conducted by Giuliana Sanò and Valeria Piro (2018) in the fruit and vegetable market in Vittoria, the social relations and relationships between the numerous actors present in fruit and vegetable markets are often more complex and sometimes conflictual.[41].

> "But they [the markets] are really killing us because many commissioners - who are the managers of the warehouses within the market - are brokers and traders at the same time. So, they are the ones who buy and then resell to other actors always within the markets network. And this allows them to set both entry and exit prices. It's not true that it is the market that sets prices. And of course, the entry prices they [the brokers] set, are very low. When you hear that 'cherry tomatoes are paid at 20, 30 cents per kilo', commissioners and the brokers are

[41] In the context of this research, an initial exploratory visit was made to the fruit and vegetable market in Vittoria, during which interviews were conducted with dealers and brokers operating within the market. However, it was ultimately determined that the workers present within the market should be excluded from the sample. This was due to the absence of organic dealers and concessionaires within the market, which made it impossible to discern a continuity with the topic of environmental sustainability, which is the subject of this research. Consequently, the data and testimonies collected on the role of the Vittoria fruit and vegetable market were mainly derived from interviews conducted with producers. However, these interviews proved invaluable in reconstructing the dynamics of operation and the power structures present along the supply chain.

> those that set these prices, because the weak link is always the producers. Because at the market the commissioner and the trader should be two separate figures. But in Vittoria this is not the case in most cases. And this leads to a conflict of interest and lowers the overall prices. At the beginning we only delivered there [to the Vittoria market], but then we realized that with the volume of production we have, which was very low, this was no longer possible and was not convenient, so we moved to other channels".
>
> (Interview with organic producer, Comiso, 24 May 2023).

On the other hand, one of the commissioners interviewed within the market argues that it is the commissioners and intermediaries themselves who represent a form of resistance and protection for producers against the pressure of large retailers.

> "The Vittoria market is a production market. Everything produced in the Transformed Coastal Zone is traded here. 74 companies trade here, and the annual turnover is around 400 million euro. Here there is still real trade, real negotiations take place every day based on where supply and demand meet. The final buyers are then the markets and warehouses that supply large retailers. Obviously, the goods leave from here and are sold to other markets after being packaged here. The goods that are sent to other warehouses, on the other hand, are reprocessed there and arranged according to the requests of the large-scale distributors, as they often require specific types of packaging...the products are packed as requested, they are packed and rearranged. Large-scale retailers usually want to buy directly from producers, they don't want to have anything to do with the markets because the markets are today the ultimate defense for producers. The markets disturb the large-scale distribution because here the price is decided day by day on the basis of supply and demand, and the large-scale distribution would like to have stable prices".
>
> (Broker and manager of one of the boxes within the Vittoria Market, Vittoria, 11 June 2023)

Sanò and Piro (2018) highlighted how power and power relations within the agri-food chain are crucial in shaping the relational dynamics between actors operating in fruit and vegetable markets. On the one hand, brokers and commissioners impose (very low) prices on producers in the supply chain, which are often determined by large distribution chains and supermarkets. It is therefore at this level of the chain that the logics of power and verticalization begin to take shape, which then

become dominant throughout the chain, forcing farms and producers to meet the demands of large retailers who act mainly through brokers and commissioners. Producers, in turn, tend to pass on the burden of these costs to farm workers, creating a cycle of precariousness and fragmentation that is reproduced at different levels of the supply chain. If the economic disadvantage suffered by producers is indeed directly reflected in the farm workers, the survey carried out allows us to highlight how precarious working conditions are also perpetuated in categories employed in other segments of the supply chain. These include, for example, workers in the processing and packaging warehouses, as well as porters and workers in the warehouses and logistics areas of the redistribution markets in Bologna and Padua.

1.2. Intermediation and redistribution markets: the case of the markets in Bologna (CAAB) and Padova (MAAP)

As with MAAP and CAAB, the majority of Italian fruit and vegetable markets are managed by local public authorities, primarily municipalities, regions, and chambers of commerce. These markets, designated as "redistribution markets," serve a pivotal function in the administration of agri-food products originating directly from production markets. As outlined in Italmercati's Position Paper 2023, the primary objective is to ensure transparency and traceability throughout the supply chain, thereby facilitating the distribution of fresh and seasonal products on a national scale. These structures have historically been configured as essential intermediaries between the agricultural production and marketing phases. In redistribution markets, the buying and selling process takes place, whereby wholesale traders sell products to final distributors, who, in most cases, are retailers. This is a strategic and functional role in ensuring an efficient flow of products along the supply chain. Several actors operate within these realities. It is therefore essential to adopt a strategic and functional approach to guarantee the optimal flow of products along the supply chain. In this context, a number of different actors are involved. A quality control officer at CAAB identified five principal categories of actors operating in fruit and vegetable markets: farmers, traders, end distributors, logistics operators and control authorities. Each actor plays a role in ensuring the proper functioning of the food supply chain, contributing to product quality, regulatory compliance, and market standards.

> "The administration and the whole management team of the market, they are all direct employees of the market, which includes inspectors like me who are in charge of monitoring the compliance of the market's activities with the rules and standards of the market. We basically act as a connection between the operators and the governance of the CAAB, we help and ensure the proper functioning of the whole market, and we have a monitoring role. Then there are the sellers, and therefore the consortia and producer associations that rent warehouse space inside the market; and the administrative staff hired by the warehouses who manage the orders and shipments from each warehouse and all those who take care of the logistics and porterage'.
>
> (Interview with quality control officer inside CAAB, Bologna, 16 March 2023)

One of the main differences between production and redistribution markets pertains to their respective operating hours. While production markets are primarily in operation during daylight hours, redistribution markets open at night to facilitate the timely arrival of goods in transit at their designated sales outlets. Consequently, night work is a defining feature of redistribution markets, which act as intermediaries between producers – and, in some cases, directly between producers and end operators – and production markets. In the case of the Vittoria market, work generally begins in the morning, when farmers deliver their produce to the market for resale to commissioners and brokers, who then promptly resell the goods to the operators and consortia of the redistribution markets. The supply chain thus follows a sequential rhythm, similar to an assembly line, with the timing and pace of work processes within each phase dependent on the conclusion of the previous one. As will be discussed in subsequent chapters, this temporal structure significantly influences the work experience of porters and warehouse workers employed within the context of redistribution markets. Such spaces are not merely locations for commercial transactions; they also serve as pivotal nodes in the broader logistic network. The structure of markets is thus typically divided into two principal sections: an outdoor and an indoor area. The outside area, frequently designated the "logistics canopy," represents the point of arrival for lorries, wherein goods are unloaded by porters and subsequently conveyed by forklifts to the inner area. The latter is dedicated to the bargaining and marketing phase, during which the actual exchange between market operators and final distributors occurs.

> "Logistics operates as follows: when pallets arrive [at the market] four hours before the market opens, they are unloaded at the centralized unloading bay, which is outsourced to a contractor. The goods are brought here, inspected, labeled with tags [containing supplier and product information], and placed in front of the companies' stands. When the companies open, they start sorting the goods according to their own criteria, as each batch is typically managed by a specific vendor, who arranges the merchandise accordingly. Then, during the night, the sale of the products begins. When the market opens, goods purchased by various buyers can be sold in the back areas, where each vendor retrieves their goods. Using the loading bay services makes the process much more organized, as customers can buy from different entities within the market. They can select the best product with the quality and price they need, creating the true concept of a market. Prices are determined daily, based on supply and demand. For example, strawberries sold as early-season produce command a high price due to low supply and high demand."
>
> (Interview to an internal warehouse operator at the MAAP, Padua, March 23, 2023)

Logistics[42] and product marketing are therefore not only the main activities of the market, but also have a significant impact on the organization of space and work within the market warehouses. In the case of MAAP and CAAB, when the market opens, the goods are moved to the warehouses located on the stalls and then bought by small retailers and traders immediately after the opening.

As in production markets, intermediation also plays a crucial role in redistribution markets in determining the price of products and the distribution of profits along the supply chain. In particular, the co-operatives and operators within the markets who are responsible for reselling the products to the final retailers are the central element of this intermediation. These actors facilitate communication between producers and final consumers, but at the same time they transfer the costs of intermediation to the product prices, which in fact differ between the production and redistribution markets. These costs, which are borne by shopkeepers and final consumers, have a

[42] From this perspective, it is worthwhile to consider the interpretation presented by Cowen (2012:322–323), which posits that logistics in the strict sense cannot be considered simply "at the service" of productive activity. Instead, it can be viewed as a "principle of organization endowed with its own internal coherence that produces spaces, organizes territories, synchronizes different and distant operations" (Cowen, 2012:322–323). As Grappi (2017:196) notes, it is also crucial to delineate the distinction between the overarching significance attributed to logistics as a function and strategic rationality, and logistics as an economic activity within the sector dedicated to transport, storage, and distribution.

direct impact on price formation, increasing it in comparison with prices in producer markets, where intermediation is generally lower.

> "Suppliers who resell goods to CAAB generally make a profit margin of 14 to 20 per cent on the sales price. The price is usually also established on the basis of the price list, which is calculated in average prices, and which guides the producers in setting prices and thus also the relative competitiveness, which is, however, very variable and also depends very much on the time of year but above all on demand. For example, if I sell a pallet of grapes at EUR 10 per kilo, then maybe the next pallet will have a slightly higher price because in the meantime demand is higher than supply. On the other hand, if the price is too high then I risk not selling, if the price of the grapes is too high, say, 20 euro per kilo, it is a problem because the operator risks not selling the grapes, which will then be thrown away or resold at a lower price. Usually, the payment is made after the final sale to consumers, when most of the goods are bought by greengrocers and retailers. If at CAAB, for example, the greengrocer buys 40 crates of fennel but then sells 30 crates, only 30 crates are paid to the supplier, while the others are either thrown away or given to charity"
>
> (Employee of an internal warehouse at CAAB, Bologna, 28 March, 2023)

As Duccio Caccioni, marketing manager for the CAAB in Bologna, explains, since the CAAB also supplies some public customers – as in the case the canteens of many of Bologna's schools – the price lists of the products within the CAAB are compulsory.

> "Where there is a public client, it is necessary to have reference price lists, because there are procurement contracts that are based on the prices listed in the official price lists. Historically, in Italy, each wholesale market has its own price list, which is registered at the Camera di Commercio, and these are daily price lists. And obviously, this also depends on the type of market, because a production market will have a selling price list, while here in Bologna, in the intermediate phase, we have a price list specific to the intermediary stage. […] In Bologna, we also had a bio market price list, which is the first in Europe, created personally by me in 2000. What does a bio market mean? It is a market where the reference prices for organic fruit and vegetables are established and decided. This is quite important because in Italy, most of the organic production is still carried out mainly by public bodies, primarily schools. Then, in general,

> in Bologna, within the CAAB, the presence of organic produce accounts for about 2%. There are two operators here who also sell organic products, AgriBologna and DiPisa, but they are not specialized in organic, as they also sell conventional products. Organic products entered the CAAB in the late 1990s when we also did an experiment and created a consortium exclusively for organic products, but it dissolved because, at the time, the organic sector was not yet so strong. It should also be noted that today, organic is mainly driven by public catering – for example, schools and hospitals. However, for organic products, everything that goes through the market must be managed separately, in separate spaces within the warehouses. Moreover, in addition to what goes through the CAAB, one must also account for the organic consumption that passes through the warehouse and supermarket's platforms".

(Interview with Duccio Caccioni, marketing manager for CAAB Bologna, January 11, 2024)

Within the CAAB, as well as within the MAAP, where only one producer is 100% organic, the role of organic farming is, in fact, rather marginal. In the case of the CAAB, this marginality is partially due to its proximity to the major supermarket distribution platforms located in the Bologna Interporto, as well as to the central Conor platform, one of the leading companies in the distribution and commercialization of fresh products for the catering sector. During the fieldwork, it became clear that the presence and significance of organic farming in the markets has undergone substantial changes and has evolved considerably over the past few decades.

> "One of the main characteristics is the verticalization of the relationship between suppliers and customers. The larger companies specialized in organic production are in fact growing – Apofruit, Brio, Ecor, Apo Conerpo – they are all huge companies that have been growing significantly for years and have now developed separate logistics channels. Compared to the beginning, when organic had a strong ideological character, organic products are now to all intents and purposes a commodity and certification and certifying bodies have also played a central role in this. Then there are a few more radical organic producers left, but in general organic is something that has been somewhat lost compared to how it was initially understood, while the original conception remains somewhat among the old hippies, who, however, struggle to interact with a larger market"

(Interview with Duccio Caccioni, marketing manager for CAAB Bologna, January 11, 2024)

The transformation of the fruit and vegetable markets has thus been accompanied by two interconnected processes, which have developed in parallel with each other. On the one hand, the transformation of organic farming, a sector that was initially characterized by production focused on ethical and environmental values, has progressively evolved towards an industrialized model. This change has gradually led to the increasing standardization of organic production, which has gradually turned into a commodity, similar to any other conventional agricultural product (Buck et al., 2000).

> "Organic was born as a possibility for peasant agriculture, as a movement that was initially structured by the AIAB, the Italian Association for Organic Agriculture, but then started to be absorbed within the industrial sectors of large-scale organized distribution. In the context of large-scale distribution, the aspects of social responsibility, biodiversity and landscape protection, which were initially an integral part of the organic approach, have all disappeared. Faced with this transformation, there are still some cooperative experiences that have been part of the organic movement from the very beginning, which have grown over time and have set themselves the goal of trying to recover the original concept of organic, to restore centrality to the relationship between people, to valorize the work of farmers and this is primarily done by realities that put social responsibility, biodiversity, fertility and food quality at the center of their business"

(Interview with Franco Zecchinato, president of the cooperative El Tamiso, Padua, March 13, 2023)

The progressive absorption and integration of organic agriculture into an increasingly industrialized supply chain have led to significant transformations, not only in the relationships among the sector's various stakeholders, but also concerning intermediation dynamics. These changes have resulted in fluctuating roles that have hindered direct contact between producers and consumers. This process has been partially offset by the intervention of large-scale retailers, which have replaced wholesale fruit and vegetable markets with their independent logistics platforms. Such evolution has restructured the relational space (Lo Cascio, 2020) aligning it with an increasingly verticalized logic. The analysis of the transformation of wholesale fruit and vegetable markets reveals the processes that have gradually reshaped the agri-food sector into one deeply

integrated with the dynamics of a global market, dominated by large distribution companies that often operate on a transnational scale. The gradual shift of intermediation from wholesale markets to the logistics platforms of individual distribution chains is a clear indicator of this transformation. Within the wholesale markets, only a small portion of the production is purchased by large-scale retailers, who typically turns to these markets primarily when their stock in autonomous warehouses and platforms is depleted. The majority of buyers, by contrast, are small retailers and local shopkeepers or international clients, particularly from countries such as France and Germany, where the demand for organic products is significantly higher. As Duccio Caccioni observed, even the very logic of wholesale fruit and vegetable market is evolving in Bologna, for instance, the market is increasingly transitioning from a site of intermediaries to a logistical hub.

> "We must also make a further distinction. On the one hand there are the products that are traded "on sight" – that is, when a trader sells to a purchaser who sees the product inside the warehouses before buying it. Because markets are places where the product is bought on sight so if I own a fruit shop, I go to the market and if I find a crate of apples that look good, I buy them. But this kind of trade is progressively being marginalized by the standardization of goods, because the more I have the guarantee that a product is standardized, the less I need to see it with my own eyes before I buy it. And this also contributes to transforming the centrality of fruit and vegetable markets. If we think of the Bologna market in 1996, at that time, around 3.5 million quintals per year were traded today we have about a half of that. But if I also add to this all the logistics goods, that just pass through this site and are therefore traded within the Conor or the AgriBologna warehouses – which are also located in the same logistic hub as the CAAB, then it reaches again 3.5 million quintals. Of these, 2 million go through the CAAB only for the logistics. Moreover, the activity of the markets is also penalized by EU policies which have significantly favoured also financially, larger producers particularly favouring the creation of cooperatives and producers' associations which then eventually, when they are very large, begin to have a direct relationship with large-scale distribution and thus go directly through supermarket platforms and there is no longer any need for the intermediation of large-scale organized distribution".

(Interview with Duccio Caccioni, marketing manager for CAAB Bologna, January 11, 2024)

2. Restructuring intermediation: from fruit and vegetable markets to large distribution[43]

The role of the redistribution markets has changed significantly over the past few decades, particularly with the emergence of large distribution chains, which often operate through independent platforms and channels, bypassing intermediary stages. The process of integration and control of logistics activities by distributors has been particularly evident in investments in large distribution centers, which serve as storage facilities for the management of goods flows (Luceri, 2013; Fernie & Sparks, 2009). In these centers, as we be demonstrated, the principal activity is logistics, encompassing the receipt of goods from producers, storage, order preparation and dispatch to retail outlets within the distribution network. Neil M. Coe (2014) has highlighted the necessity for further investigate the role of outsourcing processes and the progressive sophistication of logistics services. In examining the gradual expansion of the sector, Coe notes the transformation of the logistics industry from a field primarily focused on supporting the manufacturing industry, to one that is autonomous and actively contributes to value creation. The outsourcing of logistics services and the increasing complexity of these services have indeed fostered the evolution of this sector, which now plays a strategic and integral role in many industries globally, including the agri-food industry. In addition to large distribution centers, smaller facilities and peripheral warehouses serve as intermediary stops for goods entering and exiting the distribution network. In relation to the sales network and individual supermarket chains, distribution centers primarily handle the consolidation of orders from individual stores, which are then sent to a central purchasing unit that, in turn, communicates these orders to suppliers. From this perspective, retail outlets have been stripped of their logistical functions, and centralization has made purchasing hubs larger and increasingly significant commercial areas (Penco, 2016). According to the Europlatform (2004), distribution centers can indeed be classified as national, interregional, or regional/local sites, according to the geographic scope of the serviced commercial area. However, businesses and distribution chains tend to organize their activities in increasingly

[43] For a more in-depth look at the transformations and growth of the logistics sector, see in particular the contributions of Benvegnù (et al., 2018; 2023), who have analyzed the restructuring of labour in the logistics sector in the European context, focusing in particular on how the globalization and transnationalization of value chains have gradually led to the sector's increasing reliance on migrant labour, mainly hired through subcontracting contracts. Other important contributions that have analyzed transformations in the logistics sector include Alimanhomed-Wilson (2022), Peck (2017) and Newsome (2010).

large distribution centers that serve broader areas. The increasing tendency to centralize activities in a single distribution center, where all products converge upon entry (from producers) and exit (to retail outlets), addresses the need to aggregate demand from various stores within a region in order to achieve economies of scale in warehouse management, thus optimizing transportation and delivery costs from producers to warehouses (Penco, 2016). This restructuring of logistics and product commercialization has also redefined the roles of other key actors in the supply chain, such as wholesale fruit and vegetable markets, which have lost prominence due to logistical centralization by distribution chains. In this context, one of the producers interviewed during fieldwork—a representative of a long-established agricultural company in Bologna, active in the Bologna wholesale fruit and vegetable market since its inception in the 1940s—described the phases and transformations experienced by the market.

> "'The fruit and vegetable market in Bologna first opened in 1938, my father always had a stall in the market [...]. At that time the market was still in Via Fioravanti, then with the 1950s, the 1960s, during the green revolution, a much more highly structured agriculture started to develop, quantities increased, Bologna became full of retailers selling fruit, vegetables. The fruit and vegetable market grew, grew, because they [the retailers and traders] came from all parts of Italy, and even from abroad as it was convenient, and the market was close to the railways. The warehouses in the market grew and wanted to expand. But criticisms also started growing, as these there were trucks continuously arriving in the middle of the night, and in the Bolognina neighborhood, the issue of a growing economic business started to clash with the neighboring people. So, in the 1970s they [the municipality and the administration of the market] started to consider moving the fruit and vegetable market and enlarge it, and they started to think about moving it to where it is now...and you must consider that that area in the 1970s was still all countryside. [...] Basically [the municipality] decided to build a big agricultural wedge for the city of Bologna, exactly where the fruit and vegetable market is located now. They had also built a slaughterhouse that was open for a while but no longer exists. That whole area was to be dedicated to the primary sector [...] But it took them about 20, 25 years to move the market there. And finally, the market opened in the new site in 2000. But what has changed in the meantime? The distribution system has changed. Large retailers entered the market, and only at the very beginning and for a short period they purchased the fruit and vegetables they needed in the stores into the CAAB, and they started to have their own platforms quite soon. So what happened was that

> many farmers that were selling their products in the CAAB, those that joined the cooperatives let's say, started to serve large retailers, and the market started to lack products and goods. [...] Now within the fruit and vegetable market, the presence of operators and wholesalers is really reduced to a minimum, because most of the producers sell directly to large retailers who do not pass through the fruit and vegetable market and have other channels. Many producers, many consortia work directly with the large-scale distribution, so they don't pass through the market, they unload their goods directly to the warehouses and the distribution centers of the large-scale distribution, [...] in their platforms. Because it is clear that when the Coop, for instance, has to fill a truck, it doesn't just fill it with a producer's salad, it fills it with everything they need. So, all the producers that are part of the consortium have to get to the general platform'.".
>
> (Interview to organic producer that has a stall at the CAAB, Bologna, 27th March 2023)

As Lara Penco (2016) suggests, the domain of retail logistics faces several managerial challenges that are linked to the need to deal with large flows, complex and articulated supply markets - encompassing not only the geographical distribution of goods, but also the heterogeneity of suppliers, which may range from small, local enterprises to large, multinational corporations. Additionally, the nature of retail logistics entails the management of perishable goods, such as fresh, frozen, and dry products, which require specialized handling and timely delivery. In this framework, the role of logistics is therefore of central importance, as it has a significant impact on the efficiency and effectiveness levels of the entire supply chain and consumer satisfaction. The internalization of logistics segments within large-scale distribution companies has enabled them to obtain more favourable purchasing conditions, thereby enhancing their capacity to compete with large foreign operators with greater financial resources and to establish a presence within national markets. As proposed in a report published in 2010 by the Italian Competition and Market Authority (AGCM:45),

> "The increase in the problematic nature of contractual relations between the large-scale retail trade and its suppliers, which has become more acute in the recent phase of contraction of consumption, is part of a context of profound transformation of the sector, which has entailed, in Italy, not only an increase in the market power of the large-scale retail chains, both on the sales and purchasing markets, but also an increasing diversification of the ways in which

> distribution groups grow: 'the increase in the degree of concentration of the sector, in particular, takes place and has taken place through an increasing recourse to various forms of aggregation of a "contractual", rather than structural, nature, which translate into affiliations, purchasing agreements and other types of alliances of an associative or consortium type that substantially modify the geography of the subjects that act and confront each other on the various markets"

In addition, the AGCM mentions the rise of large platform centers, founded by various groups of a single distribution chain. Each purchasing center, and thus each platform for each distribution chain, serves as a platform for its affiliates, thereby enabling significant cost savings through collective negotiation with suppliers. In Italy, these platforms emerged during the 1980s and 1990s, with the objective of counteracting the bargaining power held by large production and processing companies in relation to a retail sector that was still characterized by significant fragmentation. These alliances thus brought about a significant transformation in procurement methods, particularly with regard to processed and transformed products. They also facilitated the development of product categories under the umbrella of the generic supermarket brand name (private labels), which have enabled large-scale retailers to compete with the branded products of manufacturing companies over time (Burch, Lawrence, 2005). In turn, the growing importance of supermarkets' "own labelled" products began to compete with the branded products of the established food manufactures. This process, which began in the 1970s, quickly favoured supermarket own-label products, which were marketed as low-cost alternatives to the premium products of brand manufacturers[44]. As stressed by Lo Cascio and Perrotta (2022), an important contribution to this debate, can be found in the studies of Burch and Lawrence (2007:9), who introduced the concept of "supermarket revolution" or "retailing revolution" to refer to the retail sector as one that "has moved beyond its traditional role of food distribution, and is now strongly influencing patterns of production and consumption". Thus, in the context of the "supermarket revolution", retail chains are able to impose prices, certifications and "voluntary" standards that

[44] The shift in the forms of control over the organization and management of the agri-food supply chain has created new problems for the retail sector as it started to take responsibility for what is produced, where and to what standards. This has meant that the attention of the retailers has been much more focused on satisfying consumer demand and shaping the demand in a way that favours consumer loyalty. This process has favored a strong concentration of power in a few retail companies and supermarket chains, which has significantly increased competition as supermarket chains seek to buy products and commodities at the cheapest price by squeezing their suppliers and creating their own brands (Burch, Lawrence, 2007; McMichael, Friedmann, 2007)

function as “entry barriers” and limitations for their suppliers, while at the same time dictating the quantities and types of products that must be processed daily (Lo Cascio, Perrotta, 2022; Salvia, 2020). As we will see in the next paragraph will further explain, this supermarket and brand revolution, which ultimately contributes to strengthening the process of industrialization of the supply chain, also characterizes the organic sector and the retailers specialized in the distribution of organic products.

2.1. Specialized retail chains: the case of EcorNaturaSì organic value chain

The strategy of reducing intermediation levels is also adopted by large retail chains specializing in quality or organic products, which often prefer to establish direct relationships with producers through autonomous purchasing centres. A relevant example is that of EcorNaturaSì, one of the first Italian networks of specialized organic supermarkets, which in 2017 inaugurated a large logistics hub inside the Bologna interport. This hub is designed to manage and store a diverse range of products, including fresh, processed, and frozen items, which arrive from suppliers after undergoing the specific processing required for the organic supermarket chain. The case of EcorNaturaSì is of particular significance as it represents one of the first experiments of brands specialising in the marketing of exclusively organic products in Italy. The company, which was established in Verona in 1992, now comprises over 300 supermarkets and is involved in the marketing, wholesale and retail distribution of organic and biodynamic products. In an interview conducted in 2011 by Marco Raimondi with Roberto Zanoni, the general manager and shareholder of NaturaSì, described how the evolution of the company's history was delineated as comprising three principal phases. The initial phase, which started in 1993, was characterized by the recognition of the supermarket as a commercially viable business model. This period saw the opening of a small shop in Conegliano, in the province of Treviso, which exclusively sold organic products. In the second phase, which commenced in 1995, it became evident that it was possible to develop a profitable business model based on organic products. This led to the opening of a full-scale supermarket under the NaturaSì brand in Milan, which proved to be an immediate success, demonstrating the viability of organic as a fully-fledged business sector. During this period, the pivotal role of franchising favoured the growth and the proliferation of sales outlets. This led to the inaugural franchise opening in Brescia, which proved to be another resounding success,

attracting entrepreneurs keen on investing in organic products. The third phase started in 2006, and was characterized by a merger with Ecor, a prominent entity in the distribution of organic and biodynamic products. Currently, there are over 300 NaturaSì stores in Italy, offering a selection of over 9,000 certified organic products (Natura Sì Impact Report, 2022). This makes NaturaSì the most significant supermarket chain in Italy, with a specialization in the sale of organic and natural products, and an annual turnover in excess of 400 million euros.

As one of NaturaSì's purchasing managers explains, the progressive growth of the company's turnover and size led to the creation of Ecorway Srl, an independent company that handles NaturaSì's logistics. This development also confirms how the restructuring and globalization of value chains have transformed the logistics sector into an autonomous industrial sector, rather than a mere support service for other production sectors (Peruzzi, Piro, 2024; Coe, 2014). On the other hand, the management of responsibilities for transport and logistics activities along the supply chain is quite variable and also depends to a large extent on the ability of the supplying companies themselves to internalize or not certain processing steps, thus providing an advantage in terms of efficiency also for distribution.

> "'Considering fruit and vegetables, we try to work mainly with small producers. [...] In some cases, where this is more difficult for logistical reasons, as in the case of Sicilian producers, we rely on producer cooperatives or companies. What do they do [the cooperatives]? Basically, they receive the products from the producers, they process them, usually within the processing warehouses, they take care of the packaging, and then they ship the final products to our distribution centre, which has been moved to Bologna four months ago. What differentiates us from other distribution chains is that we almost always have a direct relationship with the producers, even when we rely on cooperatives, or on more structured and larger companies. In most cases we look for the producers who are most sensitive to certain issues, we get to know them, we send our agronomists to make visits and analyses, to check their working methods... [...] We follow the logistics internally, even though the logistics branch of the company became independent a year ago and EcorWay was born, taking care of all the logistics...for instance it takes care of road transport, it manages the warehouses and logistics in the warehouse. So, we generally take care of picking up the goods with our own transporters. We succeed in doing this in 90 per cent of the cases, then there are some areas that are a bit more difficult to reach and there we may rely on third-party transporters who organize the trip, or the

> supplier itself takes care of it. [...] Considering fruit and vegetables, we can say that basically in 60 per cent of cases we collect from direct producers, then we rely on two large consortia, cooperatives in Sicily. One is NaturMind, in which three companies confer, and the main one is EcoNatura Group[45]... they are located in Ragusa. They mainly bring us tomatoes, peppers, courgettes, in short, the vegetables that we cannot find in the north during in winter [...] The other important cooperative is called EcoFruit and is in Bagheria, in the province of Palermo and they mainly deal with citrus fruits which are then processed by other companies close to Syracuse and Catania. In this case, the logistics are handled by the producer for the internal part, especially for the production and packaging stages. EcoFruit basically picks up the product every day, every two days, and stores it in the warehouse in Bagheria, then does the selection, the packaging, and then everything is sent to the warehouse in Bologna [...]".
>
> (Interview with NaturaSì fruit and vegetable purchasing manager, online interview, 6 March 2023)

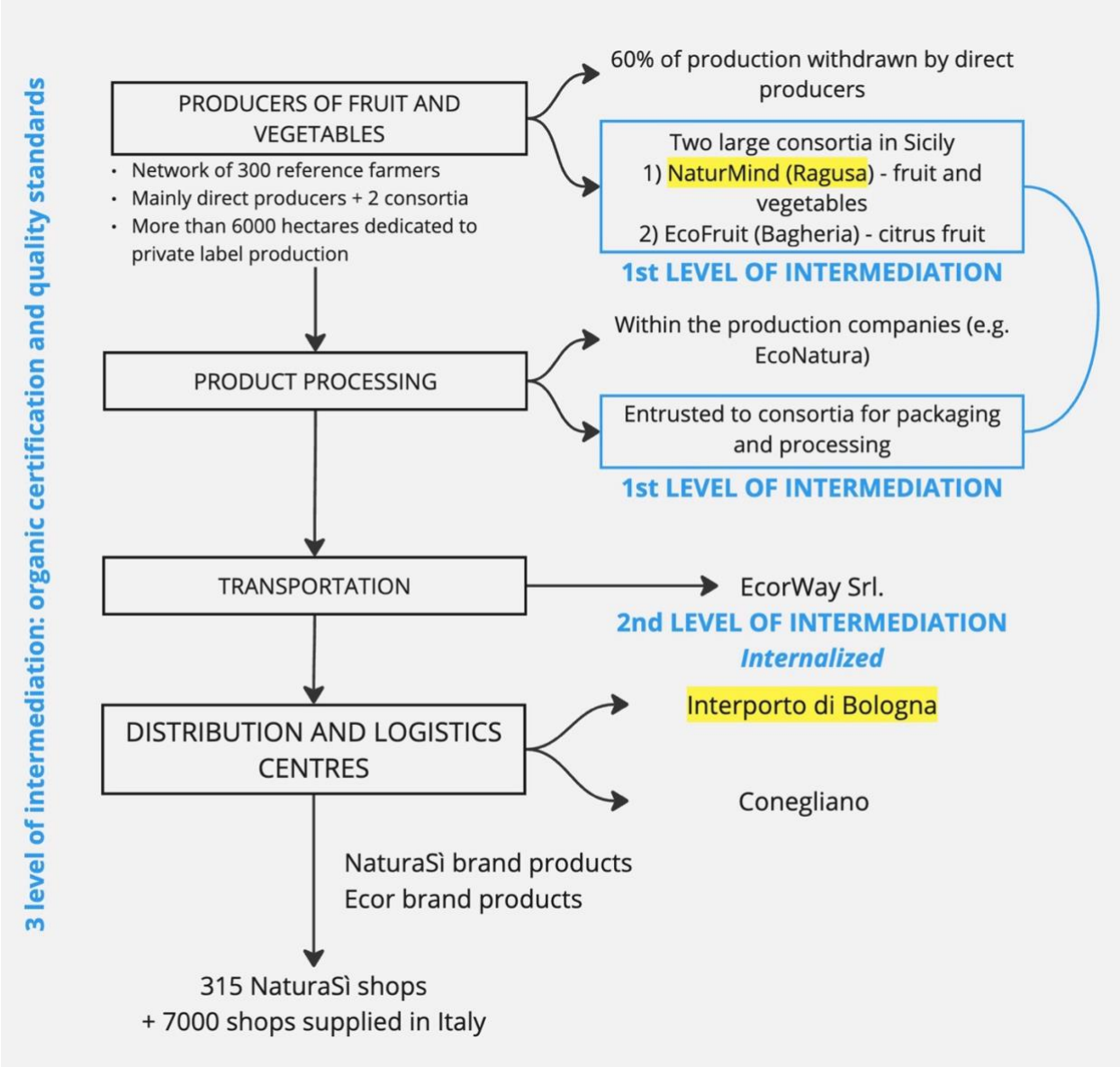
It is therefore useful to summarizes the main characteristics of a supply chain specialized in organic production, such as that of NaturaSì, similar to what has been done for the traditional supply chain, where wholesale fruit and vegetable markets are the main intermediary nodes (Figure 11). In the context of this specialized value chain, a fundamental aspect is represented by the elimination of wholesale fruit and vegetable markets, both for production and redistribution, from the supply chain. Even before considering the structure of the value chain and the interactions along the supply chain, a first level of intermediation is represented by the horizontal integration of producers organized in consortia and cooperatives, which, as in the traditional supply chain analyzed, play an essential role in certain processing and packaging stages. Similarly to what has been reported by the producers[46] which have stressed the crucial role of cooperatives and producer groups in counterbalancing the vertical integration imposed by large-scale distribution, large retailers, as illustrated by the NaturaSì case, tend to prioritize direct relations with producers. This strategy, in addition to reducing costs by eliminating intermediaries, valorizes the direct

[45] Part of the fieldwork activity conducted in Sicily was the EcoNaturaGroup consortium, located in the province of Ragusa, near Marina di Ragusa. Here, participant observation was carried out in the processing and packaging warehouses.

[46] See section 2.1.1. of chapter three, in which the role of agricultural cooperatives and consortia in the process of horizontal supply chain integration is reviewed.

relationships between distributors and farmers, thereby strengthening a bond of trust and cooperation that is central to the ethical dimension of the supply chain.

Figure 10. Schematic representation of the EcorNaturaSì organic supply chain



To this extent, the Terre di Ecor project is particularly significant, as it was established by the company with the objective of "bringing together producers who are closest to our company's mission […], farmers who operate with respect for soil fertility and who believe in a new social and economic relationship among producers, traders, and consumers, ensuring adequate income

for those who work to sustain the vitality of the land, protecting it from abandonment, degradation, and urbanization" (EcorNaturaSì S.p.A., 2022).

The creation of an independent logistics company - which effectively acts as a "logistics branch" of the company - bypasses a form of intermediation by promoting direct contact with producers, while at the same time leads to the internalization of certain processes of the supply chain. This is made possible by the company's resources, and by the volumes that are managed - over 9,000 product lines are marketed, all of them certified as organic - which allowed to efficiently internalize logistics operations. According to a representative of EcoNatura - one of the three companies that make up the NaturMind cooperative - the restructuring of the supply chain and therefore the internalization of the logistics within the distribution chain, not only increased the efficiency of the logistics but has also favored product quality.

> "Among the more generalist distributors, who are not specialized in organic products, Coop has been particularly successful in organizing an efficient logistic system. Because they want us to take care of the selection and processing process for fresh goods. Previously, we were doing a very gross selection, putting vegetables into 5- or 6-kilograms boxes…then we used to send them for further processing as they required a more precise selection. Now, however, they have realized that we have become more organized and skilled, so we take directly care of the processing and packaging of goods. They send their orders to us between 11 a.m. and 1 p.m., and then we are organized to load the trucks and then they usually depart between 8 p.m. and 10 p.m. Within 48 hours, the goods are delivered, so they can guarantee the so-called AxD, that is, departure on day A and delivery on day D— which is day when the goods reach the supermarkets. Previously, they could not do this; they had to process the goods in their own warehouses, meaning unloading from trucks and then reloading them. It was more inefficient. In that previous system, goods would depart on day A, arrive at the processing facility on day C, then they were processed, and then they reach the warehouse on day D. You might ask, what's the difference? The timing remains the same, but now the goods are handled only once, and they travel already packaged"
>
> (Interview with organic producer, Marina di Ragusa, October 23, 2023)

The transformation of the agri-food supply chain and the many efforts made by large retailers to reduce the level of intermediation have therefore had a significant impact on producers and

farmers. In particular, this evolution has shifted the site of negotiation from traditional fruit and vegetable markets, dominated by the logic of supply and demand, to a more predictive model that has established a direct channel between distributors and producers, often organized in cooperatives. This process has thus promoted a redefinition of roles, responsibilities and control dynamics along the supply chain, which has also affected the organization of work in packaging warehouses, markets and distribution platforms. To this extent, as will be shown in the following sections, one of the main differences between greenhouse work and packinghouse work is the management of time and schedules, which is strongly influenced by the demands of large retailers. In greenhouses, work rhythms remain relatively stable, driven primarily by the natural cycles of growing and harvesting. In contrast, in processing warehouses, shifts and working hours change frequently, often based on the daily requirements of buyers and retailers. Whereas in the past processing was less complex and mainly involved the storage of products in large crates for direct delivery to the customer, the integration of certain processing and packaging stages by producers now requires greater precision, extending working hours and increasing the need for a flexible workforce able to adapt to often unpredictable schedules.

Direct contact with distributors is indeed typically limited to larger companies or cooperatives with the capacity to oversee critical processing stages, thereby accentuating the disparities between small and large producers. As a consequence of these changes, larger producers are frequently able to bypass certain levels of intermediation, such as those represented by wholesale fruit and vegetable markets. In accordance with Corrado's (2018) analysis of the organic agricultural sector in Calabria, the case of EcorNaturaSì's fruit and vegetable production chain illustrates that organic production is now fully integrated into the globalized model of industrial supply chains. The more producers are integrated within the EcorNaturaSì network, the more their role changes from business actors and suppliers to partners who are directly involved in shaping the company market strategy and supply chain. This changed role favors a progressive verticalization of the supply chain where larger suppliers reconstruct the spatio-temporal organization of production even within the organic market. A comparable reorganization process has been initiated by generalist distributors, such as Coop, which have undertaken internal innovation and restructuring efforts to adapt their offerings to increasingly high and efficient quality and transparency standards, according to producers themselves. To this extent, it is also worthy of note that in this restructuring process, which was designed to enhance quality and transparency, a pivotal role was played by the

proliferation of ethical and sustainable brands within the assortment of private-label products offered by individual distributors (Burch and Lawrence, 2005). For instance, specific product lines have been established to emphasize categories, such as items with a reduced environmental impact (e.g. ViviVerde Coop, a Coop-branded eco-friendly line) or those with an ethical focus (e.g. Solidal products, also available from Coop). In the case of NaturaSì, a new product line, designated as SìEssenziali, was launched in 2023. The line comprises a selection of 50 organic products offered at more affordable prices. NaturaSì has stated its intention to forego a portion of its profit margin to make these products more accessible to consumers.

As will be seen in the following section, which describes the features of NaturaSì's logistics center located within the Bologna Interporto, the historical and organizational evolution of NaturaSì is in close alignment with Harriet Friedmann's (2005) concept of "green capitalism". This concept views the organic sector as one that has successfully adapted to the changing interests of the agri-food industry, capturing the attention of large national and transnational companies initially driven by the desire to address criticisms of intensive, chemical-dependent industrial agriculture.

2.2. The logistic hub of Natura Sì inside the Bologna Interporto

As previously discussed, distribution platform networks diverge from traditional fruit and vegetable markets as they display centralized management of logistics and commercial activities under a single brand. Despite the notable expansion of supply chain restructuring and the strategic significance of logistics in this sector, the scientific literature addressing the transformation of logistics within agri-food supply chains remains limited (Lagorio & Pinto, 2020). As a result of the collaboration with NaturaSì, which was foreseen by the financial support that funded this research, it was possible to conduct a site visit and part of the fieldwork at the NaturaSì's distribution hub in the Bologna Interporto, where the chain's distribution center is located. This facility was inaugurated in 2020, following the expansion of logistics operations previously concentrated in the historical distribution center of San Vendemiano (Treviso). The hub covers an area of approximately 40,000 square meters. The majority of goods destined for NaturaSì retail outlets are transported through this center, including fresh, processed, and non-edible products. The sole exceptions are cosmetic and frozen products, which continue to be managed at the San

Vendemiano facilities. The warehouse has been designed to accommodate the entire product range marketed by NaturaSì, which is organized into two main sectors. The initial area comprises refrigerated rooms, which are dedicated to the preservation of fresh produce and all perishable goods. The second section is dedicated to shelf-stable products, arranged on traditional shelving units reaching approximately seven meters in height. Order picking and handling operations in this area are partially automated, with semi-automatic lifts comprising small vertical elevators and roll containers that are filled with orders for delivery to retail outlets. Most warehouse workers are employed through cooperatives, while higher-responsibility roles are assigned to direct employees of the company. This division is designed to ensure a clear separation of responsibilities across the various operational sectors.

> "When we were in Veneto, all the porters were our direct employees. Now, since we opened the warehouse here, there are cooperatives... also for safety reasons. Each department, each activity, should not have too much overlap among the different cooperatives. So, in this part of the warehouse, for example, we've organized the work in such a way that the picking part, for instance, is preferably done by a specific cooperative, a single outsourced company. The automation part, on the other hand, we prefer to manage it directly ourselves. Fruit and vegetables, as well as dairy products, are handled by another outsourced company, while we manage the control and shipping activities. But we generally try to avoid interference between these different parts. Here, we have two companies managing the outsourcing. Pieve, which handles all the packaged goods, and Job Service, which manages all the fresh products and fruit and vegetables. The majority of those hired through cooperatives are foreigners, about 80%"

(Interview with the warehouse manager of NaturaSì at the Bologna Interporto, Bentivoglio, April 27, 2023)

As demonstrated by Bubbico et al. (2023), contemporary business relationships are characterized by increasing fragmentation and complexity. This phenomenon is not only a consequence of the widespread adoption of outsourcing and subcontracting practices, but also arises from the multifactorial connections and dynamics that characterize modern value chains. From this perspective, the logistics sector has undergone a gradual process of autonomization. The sector is distinguished by intricate inter-company networks, which have enabled to provide

essential services to other sectors of the global economy (Benvegnù et al., 2018; Coe, 2014). As stated by Grappi (2016) logistics comprehends a set of technical standards, infrastructures, organizational procedures that turned logistics from a sector that was a simple function dedicated to organizing supplies and distribution, to a structural reorganization of the relationship between mobility and production that has transformed the modality of production.

In the context of packaging warehouses and platforms in large-scale retail distribution, the global restructuring of the value chain – which is increasingly focused on continuous rhythms and synchronized with real-time updated demand – has resulted in the segmentation of the workforce along supply chains. In the context of fruit and vegetable markets, logistics is primarily a service that supports the core commercialization of products and the negotiation of prices between operators and end customers. In contrast, within logistics platforms, logistics assumes a central role. This sector is characterized by significant fragmentation, with a prevalent practice of outsourcing storage activities to a diverse range of service providers, including temporary employment agencies and cooperatives. In accordance with the existing literature about working conditions in logistics warehouses (Bottalico, 2018; Alimahomed-Wilson, 2019; Franz et al., 2024), the practice of outsourcing has become a well-established phenomenon that, at times, may involve informal or illicit management methods. It is common practice for client companies to engage only a minority of the workforce directly, with the majority of tasks, particularly those requiring greater physical exertion, being delegated to workers employed by cooperatives. Furthermore, the relationships between cooperatives and client companies are frequently characterized by long-term stability. The opening of the warehouse at the Bologna Interporto constituted an extension of the pre-existing relationship with a cooperative that had already supplied labour to the warehouse in Veneto. In comparison to the working conditions observed in fruit and vegetable markets, two main aspects characterize and differentiate the conditions observed in logistics facilities. The first issue pertains to the organization of work. The warehouse at the Interporto operates on a continuous cycle, without interruption.

> "Work is organized into four shifts: those working at night are actually a smaller group, mainly working from 6:00 AM to 12:30 PM. Then there's the shift from 1:00 PM to 7:30 PM, followed by the shift from 6:30 PM to midnight, and the last shift runs from midnight to 6:30 AM. This schedule ensures continuous

operations throughout the day, as there is a lot of work to be done. In fact, we are open and work every day except Sunday."

(Interview to porter employed within the NaturaSì logistic hub at the Bologna Interporto, Bologna, April 27, 2023)

The other distinction pertains to the degree of automation within the warehouse, as automation and innovation were pivotal elements in the design phase. According to the company representative interviewed, automation represents a viable alternative to cooperatives, also ensuring superior working conditions for employees[47].

"There are about 200 employees in the warehouse, but the volumes of products that are moved and managed vary significantly. Right now, during this shift, we have two workers in charge of the automation sector, which processes about 30% of the products; the others are responsible for moving goods from one part of the warehouse to another, the so-called 'retrattivists.' Then there are others who handle the fruit and vegetable sector. The automated warehouse is quite average in terms of innovation. […] The logic of work here is optimization...We manage approximately 1,200 types of products. If we had to handle them all manually, we would need a lot more space. The longer the picking path, the more inefficient it becomes. So, for example, in this part of the warehouse, the workers manually assemble the orders, and then the orders enter the machines, with the packages arriving here via conveyor belts, where the operator then fills the polystyrene boxes.

(Interview to one of the responsible of the logistics hub of NaturaSì in the Interporto of Bologna, Bologna, April 27, 2023)

From this perspective, the subsequent section demonstrates how the automation and digitalization of management processes has constituted a pivotal element within the restructuring plans that have been devised for the agri-food markets, particularly in the context of the green

[47] Grappi (2016) stresses how automation, by favoring the use of technological information and highly specialized machines favors an increasing flexibility and reversibility of production and processing process. In this context, the paradox of labour emerges as it defines the way in which the relationship between the workforce and machines is organized. Therefore, the paradox can be translated into a continuous balancing between investments in automation and pressure on the workforce employed within the warehouses.

transition framework and the initiatives aimed at promoting sustainable technologies within the logistics hubs of the fruit and vegetable markets of Bologna and Padua.

3. The green transition along the supply chain

This chapter's concluding topic addresses the progressive incorporation of ecological and sustainable elements throughout the food supply chain, and the influence of this process on the redefinition of the relationships between the diverse actors involved. This transformation can be elucidated through the lens of the corporate environmental food regime, as postulated by Friedmann (2005). In this context, it is helpful to recall some of the considerations outlined in Chapter 2, where it was highlighted how agricultural sustainability policies – with particular attention to the growing investment in organic farming and sustainable agricultural practices – have been integrated into the European Union's framework of intervention. Indeed, the implementation of the Green Deal and the Farm to Fork initiative has compelled the Common Agricultural Policy (CAP) to incorporate pivotal objectives pertaining to the green transition. These objectives have been progressively extended to the industrial policies of member states, as illustrated by the funding of the Next Generation EU fund, which allocates 37% of its resources to economic revitalization in a sustainable and innovative manner. This integration of sustainability and digitalization objectives responds to the need for a major restructuring of industrial policies, as demonstrated by the Italian National Recovery and Resilience Plan (PNRR), which has made it clear that the logic of green and digital capitalism has turned the ecological and technological transition into a strategic sector for investments for European capital, also in the light of recent geopolitical contingencies and socio-economic transformations, including the war in Ukraine.

The aim of this section is therefore to examine the main ecological elements resulting from this integration and to analyze, at a macro level, the influence of the ecological crisis on the organization of the agri-food chain, highlighting the contradictions and tensions that have emerged. In this perspective, it is useful to recall the thought of James O'Connor (2021), who identifies the "second contradiction of capitalism" as a tension between productive forces, relations of production and conditions of production. According to O'Connor, the ecological crisis is a manifestation of how capital tends to undermine its own conditions of reproduction, not only through pollution and the degradation of natural resources, but also through the rising costs of infrastructure. Therefore, He identifies two potential responses to this contradiction. Firstly, he

suggests the need for enhanced collaboration between capital and the State in order to facilitate a revised regulation of the 'metabolism' between humanity and the natural world. Secondly, it proposes the importance of increased planning as a crucial element in enabling adaptation between social relations and productive forces. From this perspective, European funding for the green transition in the context of the PNRR, as well as mitigation and adaptation policies, can be interpreted as strategies to restore the conditions of reproduction and accumulation of capital in the face of the environmental crisis.

3.1. The role of the PNRR in the restructuring of fruit and vegetable markets

In the context of the fruit and vegetable sector, the allocation of financial resources and the pursuit of investment opportunities with a view to facilitating the digitalisation of processes and the implementation of energy and ecological efficiency plans, as set out in the PNRR (Italy's National Recovery and Resilience Plan), assume a particular significance within the logistic sector. In the agri-food industry, supplychain management, requiring strict adherence to timelines in order to ensure the quality, preservation and traceability of products throughout the entire supply chain (Krstic et al., 2022). It is of paramount importance to control temperature in order to mitigate the perishable nature of products and the variability in quality that can occur in the agri-food sector, which encompasses both organic and conventional products. This requires the effective integration and communication among the various levels of the supply chain, enabling enterprises to share information and strategies for optimal resource management (Soosay & Kannusamy, 2018). Over the past few decades, the adoption of digital technologies has led to increased efficiency and traceability along the supply chain, with optimized processes and product flows (Kim et al., 2018; Johnson & Vitale, 1988). The use of sophisticated tools, including predictive analytics, artificial intelligence, and other pioneering technologies, has been employed to advance environmentally sustainable practices and economically viable solutions, with a specific focus on securing financial resources to facilitate the ecological transition. In Europe, the digitalization of the supply chain represents a fundamental aspect of the green transition, with extensive application within the PNRR framework. On the 5th of August 2022, the Italian Ministry of Agriculture issued a ministerial decree that allocated €150 million in PNRR funds to support investment projects aimed at modernizing wholesale agri-food markets and enhancing their logistical capacity. In particular, within the fruit and vegetable and wholesale market sectors, the allocation of €150 million through

PNRR funds has assumed a pivotal role in promoting and supporting investment projects aimed at modernizing and enhancing the efficiency of wholesale agri-food markets and their logistical capacity. As reported by Italmercati (2024), 19 of the 22 markets within the Italmercati network submitted applications for the subsidies, with 14 ultimately receiving a total of €151 million in funding. In alignment with the PNRR's objectives, the approved projects, currently in the financing phase, focus on two key areas: firstly, reducing environmental impacts and driving the ecological transition, which is classified under the "green tag"; and secondly, digitalizing activities and adopting digital solutions, which is classified under the "digital tag" (Figure 11).

In more detail, the interventions can be grouped into the following five categories of action:

- The efficiency and improvement of commercial and logistical capacities is addressed through the following measures.
- Reduction of environmental impacts through energy upgrading.
- Reduction of food waste.
- Restructuring, expansion, restructuring and digitalization of areas, spaces and buildings related to the activities and logistical processes of the market areas.
- Improvement of accessibility to hub services and strengthening of infrastructure security.

Figure 11. Markets that are part of the Italmercati network and that received the fundings within the framework of the PNRR

Source: Italmercati report (2024)

The projects financed are specifically designed to enhance infrastructure efficiency, improve energy efficiency and insulation of buildings and logistics platforms, and optimize the cold chain to preserve product quality, improve storage and thus reduce waste. All projects are designed to advance more sustainable models and decarbonization processes in logistics. Regarding digitalization, the restructuring measures primarily pertain to industrial processes, the establishment of digital logistics platforms, the configuration and digitalization of access, and the implementation of video surveillance systems supported by artificial intelligence systems capable of analyzing user behaviour.

In the case of the Centro Agroalimentare di Bologna (CAAB)[48], the project - which ranked second in the ranking of investment projects in Italian agri-food markets - includes five main interventions aimed at reducing environmental impact, improving accessibility and strengthening infrastructure, improving the efficiency of commercial and logistical capacities, promoting the digitalization of processes and reducing food waste[49].

During the press conference to present the CAAB's new financing and restructuring project, CAAB president Marco Marcatili said he wanted to

> "make the CAAB even more attractive, attract the interest of new operators and promote a collaborative logic. We want to position ourselves more and more as a partner of our operators, working on common objectives and strengthening the character of CAAB as an important hub of the agri-food industry".

The PNRR-funded project therefore envisages the construction of a photovoltaic plant that will make the market structure completely energy self-sufficient and extend the energy community beyond the market structure to include both the operators and some of the citizens of the Pilastro district, which is close to the market structure. As stated in the Sustainability Report, CAAB, which has had SGS certification for almost twenty years for its system of monitoring the hygienic and sanitary quality of fruit and vegetables throughout the supply chain, has also stated that in 2022 it will begin the procedures to become a Certified B Corp, Certified B Corporation[50]. In addition to the strictly environmental aspects, CAAB's sustainability report also emphasizes the desire to

[48] Much of the information gathered in this section was taken from the CAAB website. In particular, from the PNRR funding press conference (https://www.caab.it/bologna-missione-clima-dal-pnrr-al-caab-10-milioni-di-euro/) and the CAAB's 2020 energy and ecological transition report (https://www.caab.it/caab4-il-centro-agroalimentare-di-bologna-capofila-di-un-grande-progetto-di-transizione-energetica-nel-cuore-della-citta/l)

[49] Prior to the allocation of funding under the PNRR, the municipality of Bologna – which is the proprietor of 80% of the CAAB – had already identified the CAAB as a 'large energy transition laboratory' within which to promote good practices involving public institutions and academia. The CAAB's photovoltaic plant, which commenced operation in 2020, represents the largest photovoltaic plant in Italy with a storage system for self-consumption of energy. As detailed in the Sustainability Report prepared by CAAB for 2020, the market produced a total of 1,485,677 kWh of energy from renewable sources, with a total value of EUR 92,943.95. The report also highlights the positive outcomes of the separate waste collection initiative, which in 2020 covered 83% of the waste produced. Furthermore, it emphasises the effectiveness of the partnerships with charitable and civil society organisations in preventing and recovering food waste.

[50] The Benefit Corporation (B Corp) certification was launched in 2007 with the aim of increasing corporate awareness and credibility on social issues (Gehman and Grimes, 2017; Honeyman, 2014). In line with the environmental and social sustainability paradigm and thus the UN Sustainable Development Goals agenda, B Corps (benefit corporations) are companies that are committed to going beyond the value of profit and gain to also promote and create social and environmental impacts (Krstic et al., 2021).

pursue a logistics model that is not only sustainable, but also based on solidarity and ethics, “because we know that the rate of vulnerability of work in this sector is high” (from CAAB's website).

In this context, it is interesting to note that one of the most significant aspects of the report is the declared focus on gender sustainability, stating that “CAAB considers gender equality to be one of the cornerstones of its corporate policy. In fact, its workforce is almost evenly divided between men and women, with the majority being women (53%)”. However, when one enters the main structures of the market, where the main logistical and marketing activities take place, it becomes clear that most of the operators and workers active during the night hours are almost exclusively men, most of them migrant workers. However, this aspect does not seem to contradict what the CAAB says about "*its employees*", since all the portering work inside the warehouses and the loading and unloading shed is entrusted to external cooperatives, which provide workers to individual operators according to their needs through subcontracting agreements. In fact, within the CAAB there are several agencies and cooperatives that manage logistics, order picking and portering services within the market and warehouses. In many logistics’ platforms, the workers directly employed in the warehouses represent a minority and almost non-existent part of the workforce operating within the sites (Quondamatteo, 2023; Piro and Sacchetto, 2020; Lo Cascio and Perrotta; 2022). In particular, within the European agro-food production chain, different forms of public and private intermediation reinforce the process of verticalization and fragmentation of the supply chain, favouring the introduction of standards with negative consequences, especially for actors positioned at the lowest levels of the chain (Garrapa, 2016; Salvia, 2019). In the following sections, the contractual and working conditions of workers in the Padua and Bologna food markets will be presented in more detail; however, in this section we want to anticipate how the integration of environmental certificates and standards in fruit and vegetable markets, such as the CAAB, is in perfect continuity with the forms of fragmentation and outsourcing of production processes that characterize the Italian and European logistics sector (Benvegnù et al. 2017; Coe, 2014). Moreover, the strengthening of the role of digitalization within markets, aimed at improving the internal control of the entry and exit flows of means and goods and at increasing transparency in the definition of flows, also has a significant impact on labour (ISMEA, Italmercati, 2024), favouring an increase in control over porterage activities and the loading and unloading of goods.

Although efforts to improve the efficiency of logistical facilities within the sector can certainly have a positive impact on the work processes within the market, it should be noted that none of the measures envisaged in the NRP project have as their main objective the improvement of working conditions within market logistics. According to the interviews conducted within the market structures, one of the main problems of the CAAB, both for the porters and for the warehouse operators within the market, is related to the market hours, which make it difficult to find workers willing to work at night in the warehouses and in the loading and unloading shed.

> "Changing the timetable is an issue that has been around for 10 years, it's also an important issue for the emancipation of the labour market. But the problems for the rest of the city would be many. All the trucks coming to the market have a significant impact on the the 8 a.m. traffic. The warehouses and the buyers who bring products from Tuscany back to their towns to resell, how will they manage if they must open their shops at 7 a.m.?"
>
> (Interview to the CAAB president, Bologna 24 gennaio 2024)

In the case of the Padua food market (MAAP), the PNRR funding - which consists in more than six million euros in total - will be used to renew the refrigeration systems, expand the video surveillance and photovoltaic systems, and restructure the automated access system. The social sustainability report also states the need to emphasize and enhance social sustainability, to promote the implementation of the principles of solidarity and legality, and to ensure "constant monitoring of health and safety conditions in the workplace". In 2022, a working table was set up with the labour inspectorate and trade unions to protect the safety of logistics workers at MAAP. Around 900 people currently work at MAAP, and according to the sustainability report published in 2023, one of the goals is to meet increasingly ambitious environmental, health and safety criteria. To this end, the MAAP has drawn up a document regulating cooperation with third parties, to which all concessionaires and market operators must adhere. In 2023, however, the Labour Table did not meet because direct audits were being carried out by the competent bodies, in particular the Territorial Labour Institute, the results and procedures of which were still to be published at the time of writing. In fact, at the end of 2022, within the framework of the MAAP, the presidents of two cooperatives managing porterage and logistics services in the market's warehouses were arrested on charges of illegal brokering and "caporalato" to the detriment of some migrant

workers[51]. Once again, then, the fragmentation of the labour and supply chain and the outsourcing of services make it possible to maintain a flexible and cheap workforce, often made up of migrants.

Thus, in continuity with studies on working conditions in the slaughterhouses (Piro and Sacchetto, 2020) and fourth-range salads (Perrotta and Lo Cascio, 2021) sectors, as well as with the international literature on the role of contracting in industrial relations (Drahokoupil, 2015; Grimshaw et al., 2019; Holst 2014), a clear distinction emerges between direct and subcontracted workers. On the one hand, in defined portering work, which is mainly managed through subcontracting contracts, there is a high degree of intermediation with forms of control by direct workers over indirect workers, as an increasing number of direct workers are employed in coordinating roles of the activities delegated to the contracting companies. On the other hand, this differentiation manifests itself in ethnic segmentation, as most of the workers directly hired by the market are of Italian nationality, while among the indirect workers there is a significant presence of migrants. This fragmentation of the workforce thus affects both the internal organization of the market and logistics, as well as contractual conditions. From this point of view, some studies (Cavalca, 2022; Landini and Ferranini, 2022) have already pointed out that, despite the considerable resources allocated to the logistics sector by the PNRR, it does not seem to have sufficiently addressed some of the main economic and social problems in Italy, particularly regarding gender and generational inequalities, poor work and housing precariousness.

3.2. The role of organic certification: between intermediation and private regulatory regimes

As demonstrated by the significant funding and investments allocated by the PNRR for the green restructuring of Italian agri-food markets, public funding often becomes an instrument for regulating and planning capitalist development through an increasingly green perspective within the framework of the green transition. Alongside public funding and investment plans, various private regulatory regimes have also emerged, where quality and organic certifications play a central role. In general, private regulation refers to the establishment and creation of private conditions and guidelines for structuring and defining production standards, primarily developed

[51] De Salvador Serena, *Padova. Caparolato al MAAP. La Direzion: "Pronta la revisione interna: l'ente non ha nulla a che fare con i rapporti tra ditte e coop".* Il Gazzettino.it. (Accessed on November 17, 2024) Available at the link: https://www.ilgazzettino.it/nordest/padova/caporalato_maap_sfruttamento_facchini_difesa_direzione-7783532.html

and implemented by non-state actors (Bartley and Coe, 2022). These regulations may address a variety of issues—ranging from labor and safety standards to the central role of environmental concerns. In many cases, large production chains have integrated ethical or sustainable product lines into their supply chains to meet the demand and expectations of consumers increasingly interested in environmental and social issues. The dissemination of these private regulations has also benefited major brands, which have played a pivotal role in restructuring supply chains by emphasizing and leveraging sustainable and green branding.

The research by Grabs and Ponte (2019) on the transformations within the coffee supply chain provides valuable insights into the role of certifications and private standards in reshaping agri-food supply chains. The authors identify two initial phases during which the environmental and institutional context evolved following the reorganization of the supply chain's governance and structure. In the analyzed phases, it becomes evident that large companies have assumed an increasingly dominant role in governance, while public institutions have sought to mitigate growing inequalities in bargaining power, working to strengthen the position of coffee producers. In the European context, particularly within the organic supply chain, it is noteworthy that ecological transition strategies—especially the Farm to Fork initiative—aim to reinforce the position of farmers within the supply chain to enhance their bargaining power. This initiative promotes an agricultural policy increasingly supported by production subsidies, as discussed in the first chapter. Regarding European legislation, organic regulation serves as the framework for individual countries in defining national standards and control procedures. In Italy, several private and control bodies have thus emerged to oversee the correct application of European legislation. According to Regulation 2018/848, the European organic label can also be accompanied by national or private labels. Considering the role of organic production and its progressive integration into the agro-industrial supply chain, it is essential to highlight that organic products follow parallel and distinct paths compared to conventional ones, even when both product types converge within the same spaces. For instance, in processing warehouses, when companies handle both conventional and organic production, the processing lines are strictly separated to ensure product integrity and prevent contamination, thereby guaranteeing compliance with certification standards and transparency for consumers.

> 'We started doing also organic agriculture four or five years ago when there was an increasing demand from customers. In our company organic and

> conventional products follow two separate production and processing paths. For example, we only have conventional at this plant. Then we have a company in Marina di Ragusa that processes organic and there is therefore a dedicated processing line. Everything has to be separate. Here, if we want to use the same processing lines for both organic and conventional products we would have to sanitise them every time, but this would not be sustainable, it is not efficient. So we send the organic crates to Marina di Ragusa, where we have another cooperative that processes them, and that packages them. They also make processed products there. The point is that everything, from the processing to the storage area, must be dedicated and separate, they cannot be put together with the conventional product.'
>
> (Interview to organic and conventional producer, Marina di Acate, October 25, 2023)

The transition to organic production systems thus entails an increase in processing stages, particularly for companies that partially adopt an organic approach while continuing to rely on conventional methods for the majority of their production. The diversification of processes, driven by organic regulations and quality certification requirements, significantly impacts the capacity of enterprises to implement these provisions. The interviewed producer, who heads one of the largest agricultural companies in Vittoria, emphasized that integrating organic production often necessitates the outsourcing of certain processing stages. In this case, the conversion to organic does not only result in higher costs associated with purchasing inputs—such as seeds, plants, pesticides, and pharmaceuticals authorized under European organic regulations—but also generates additional expenses due to the multiplication of production channels and intermediaries. This operational complexity proves particularly burdensome for companies managing both an organic and a conventional production line, thereby widening the economic and operational gap between small and medium-sized enterprises and large ones, already established companies in the sector, as discussed in previous sections. This phenomenon is also linked to how certification guidelines are defined.

> "We were the first Demeter-certified company to grow greenhouse vegetables. About eight years ago, we needed to obtain this certification, but there was no prior experience with greenhouse vegetables in relation to Demeter standards. So, together with them, we designed a tailored pathway to experiment with biodynamic farming in greenhouses. It took us seven years, but in the end,

> we succeeded. […] We introduced donkeys because, when we were transitioning to biodynamic farming for Demeter certification, there was a surge in demand for the certification. The biodynamic association started rightly setting stricter requirements. One of these was the inclusion and maintenance of animals as part of the farm cycle. So, what animals should we bring in? We thought of donkeys, which are very gentle animals, provide significant help, and act as natural lawn mowers. Plus, we use all their manure in our greenhouses. […] We tried to translate all the more philosophical aspects into agronomic practices. In collaboration with them, we conducted experiments that yielded good results. For example, cover cropping in greenhouses, which wasn't done before, and the use of mature rather than fresh manure. Previously, some used fresh manure, but it has a very high ammonia content. Instead, we collect it around January and place it over there [points to an uncultivated area with disturbed soil] … we leave it there to drain, letting the rain do its work. We also apply inoculants of organisms and biodynamic preparations. By June, July, or August, it becomes mature manure, which avoids overloading the soil with ammonia-based salts".
>
> (Interview to organic and biodynamic produce, Marina di Ragusa, October 19, 2023)

This is an extract from an interview with one of the pioneers of organic and biodynamic agriculture in the province of Ragusa. His company, one of the largest and most established in the sector, has played a key role in defining the standards for biodynamic greenhouse production under the German Demeter label [52]. Compliance with these guidelines requires the integration of many aspects into the organisational framework of a farm, resulting in a significant increase in the workload of farm workers. This increase manifests itself in various ways, including the introduction of animals, compost management and the adoption of preventive approaches to pests

[52] The Demeter label represents the only global certification mark for biodynamic products. As will be further explored later, compliance with the standards outlined in its guidelines is verified through annual inspections aimed at ensuring adherence to the established requirements. Particularly noteworthy in the case of Demeter is the inclusion of the principle of social responsibility, which emphasizes the importance of ensuring fair working conditions within companies. On its official website, the Demeter label declares an active commitment to integrating social aspects related to labor conditions, even introducing a new standard for training inspectors tasked with conducting audits within enterprises to ensure compliance with workers' rights. Among the rights mentioned are the obligation to provide at least three weeks of annual leave, the prohibition of employing minors under the age of 15, and the commitment to promote bi-monthly meetings to improve work organization and ensure safety standards that protect workers' health (from Demeter website. Accessed on November 16, 2024. Available at: https://www.demeter.it/certificazione-demeter/)

and plant diseases. Organic production - and even more so biodynamic production - requires a greater number of operational phases, contributing to an overall increase in productive labour (Lundqvist, 2000; Berbec et al., 2018; Hilal et al., 2012). In this context, the influence of a leading company in the definition of guidelines can reinforce the vertical structure of the supply chain and, in extreme cases, even lead to a reversal of roles, positioning leading producers in a dominant role, even over distribution.

> "Who invented certifications? Supermarkets. But they ended up shooting themselves in the foot. Because by setting all these requirements, they can't just buy from anywhere. They have to buy from companies that can meet their demands. On the one hand, this is a guarantee for those who can comply. For us, for example, this means we have few competitors and can set the price we want. In the past, [supermarkets] bought from everywhere, without any controls. But now we can establish the price and say, 'Look, producing a kilo of peppers costs this much,' and you can decide. This also allows you to make contracts and plans. For instance, with this greenhouse, I know I'll sell all of it because we've already done the planting and signed the contracts".
>
> (Interview to organic and conventional producer, Niscemi, June 1st, 2023)

As a result, larger companies, which are sector leaders and hold a highly competitive position compared to local enterprises, are able—precisely due to the provisions and guidelines established by certifications—to assume a privileged role. This advantage applies not only over other companies but also over large-scale retailers, which are, in turn, constrained to limit their supply of products to those producers capable of meeting the requirements outlined in the certification guidelines. From this perspective, some producers also recognize large-scale retailers as regulatory actors capable of setting stricter requirements than those established by European or national organic regulations. As suggested by de Castro Pericacho et al. (2020), the analysis of these standards has, in some cases, led to a redefinition of value distribution along the supply chain and among its various actors. In certain instances, this dynamic also favors large producers, enhancing their position within the value chain (Ouma, 2010).

> "The buyer [large-scale retailers], when it comes to phytosanitary aspects, wants to be even stricter than current regulations. They also demand greater transparency, clarity, and guarantees regarding labor conditions... Let's say that

> the State... has not managed to address certain gaps, but some retail chains, under consumer pressure, have stepped in. This has also become an important marketing tool. So, let's say that large-scale retail, as monstrous as it is, from my point of view, has over time also adapted and tried to respond to both consumer and worker expectations... In many cases, to create a cleaner image, and sometimes, it may just be an image. In other cases, however, there are actual results and progress, at least in terms of health and safety."
>
> (Interview to organic and conventional producer, Niscemi, June 1st, 2023)

This regulatory and private role is therefore recognized by the companies themselves, which – in line with the arguments put forward by de Castro Pericacho et al. (2020) – view certifications and inspections carried out by large-scale retail as serving a dual function. On one hand, they act as mechanisms that promote the neoliberal bureaucratization of production processes; on the other hand, they serve as forms of governance, primarily exercised through private standards. These standards become direct forms of control, based on the establishment of voluntary norms for safety and quality that producers and other actors in the supply chain must adhere to if they wish to access markets and control the leading firms in the chain (Bair, 2017).

> "We have a set of guidelines called the 'Terre di Ecor Disciplinary,' which is applied to all agricultural suppliers. It includes a series of parameters that are more stringent than those required by organic farming and are often oriented towards biodynamics, although adherence to biodynamics is not mandatory. The guidelines also cover various aspects related to contractual matters, the company, and its relationships with employees and workers. In the case of fruits and vegetables, the supplying company is committed to meeting legal requirements regarding the treatment of workers. When agronomists visit the companies... this is not the main aspect they focus on, as these inspections are primarily conducted by agronomists who mainly deal with the agricultural management of the company. However, there is still attention paid to these more... social aspects."
>
> (Interview with quality and fruit and vegetable managers for NaturaSì, Bologna, March 6, 2023)

From this perspective, as emphasized in the first chapter (section 4), the emergence of a new private bureaucracy has also fostered the rise of a group of actors dedicated to designing and evaluating the quality of companies in relation to the standards set by large-scale retail[53]. However, these actors are not always specialized or trained to monitor social aspects. In the case of NaturaSì, for example, it is the agronomist who, on an annual basis, is responsible for conducting assessments related to all technical and strictly agricultural aspects, and who also carries out checks on the regularity of contracts and payrolls.

> "As Coop, we have a series of audits whose purpose is to ensure that, at the company level, working conditions and the provisions set by the supply chains are respected. These figures are sent to verify that the company complies with the guidelines of the disciplinary codes, and product assessments and analyses are carried out regarding organic certification. For several years now, we have also started conducting checks to ensure that companies comply with contracts, labor laws, and our audits. In recent years, our audits have also begun conducting interviews to speak directly with workers and learn firsthand about their working conditions within the companies."
>
> (Head of Sustainability and Innovation for Coop Italia, Bologna, December 2023)

A crucial element related to the forms of control exercised by audits on producers concerns the differing attention given to environmental versus social aspects. In the case of environmental certifications, in fact, particularly stringent requirements and provisions are outlined, limiting the use of drugs and pesticides often far more restrictively than European regulations. However, this rigor does not extend equally to the working conditions of employees. Regarding social aspects, the brands and certifications examined in this study claim to implement strict controls on manufacturing companies, particularly regarding the protection of workers' rights. However, these checks are limited to ensuring compliance with laws and requirements already established by

[53] The mechanisms and functioning of certification processes within the agri-food supply chain are particularly interesting when considering the reconstruction provided by de Castro Pericacho et al. (2020), which demonstrates the high level of bureaucratization involved in this process. Regarding organic certification, the authors highlight that in order to obtain the quality seal with the EU symbol, companies must meet the requirements set by European regulations, although these can also be accompanied by additional levels of certification that may be developed by professional associations, producer associations, distribution groups, social movements, or NGOs. At the top of the certification process are the standard-setting bodies. In the case of private standards, the decision to align with these guidelines is voluntary, and their recognition is based on private standards that function as normalization entities, overseeing the design and evaluation process, which is subsequently accredited by the entity itself.

national legislation, without introducing additional or stricter measures, as is the case with provisions for organic certification and the promotion of environmental sustainability. Finally, although not the direct subject of this analysis, it is important to highlight the perception—shared by institutional representatives as well—that the rise of private certifications and the institutionalization of market and supply chain relations have progressively influenced the role of state laws and public oversight bodies, such as the labor inspectorate.

In a significant excerpt, Bruno Giordano, former director of the National Labor Inspectorate and magistrate of the Corte di Cassazione, describes this process as a true paradox, observing how the transfer of the control function from the state to the market has over time led to a gradual loss of interest in social issues, which have been sacrificed to favor the dominant economic interests in the Ragusa area.

> "The paradox here [in Ragusa] is that the rule is the control of the business partner, rather than the State. It is about agreements between producers and entities with a certain power relationship – Coop, large distribution companies. Therefore, the content of the controls is dictated by market demands, but controls over social aspects are of less concern […]. This situation is referred to as unfair competition, and in response, regulations have been defined, such as the European regulation against unfair practices, which will be adhered to by those corporate groups that already comply with those provisions, but others will not. […] In the case of Sicily, the situation is even more specific, as the prerogative is to have a regional labor inspectorate that must independently select and hire inspectors. However, this prerogative has not been exercised because labor inspections must focus on evasion, social security, and violations of safety regulations. And when all of these issues are the norm… it's referred to as the regionalization of this service, which, however, also opens up avenues for illegality. From this perspective, all territories and the political realities of the region are completely devoid of control. This represents a true form of anomie, an absence of oversight that, in practice, empties the meaning of regulations."
>
> (Interview to Bruno Giordano, Ragusa Ibla, July 21, 2023)

Conclusions

This chapter explores the complexities of the agri-food supply chain, particularly focusing on the role of intermediation and its interrelation with how evolving dynamics are shaped by the increasing role of large-scale distribution within the context of the current Corporate Environmental Food Regime.

Firstly, it emerges that the role of intermediation along the supply chain has been changing significantly. Traditional fruit and vegetable markets, which once served as crucial intermediaries between different stages and actors of the supply chains, are losing their prominence as large retailers increasingly establish direct relationships with producers. This shift is accompanied by the emergence of autonomous logistics platforms, which streamline operations and reduce retailers' reliance on intermediaries, thereby altering the structural dynamics of the supply chain. As a result, large producers are favored in this process of restructuring as their influence over retailers and firms is significantly increasing also thanks to their importance in defining the guidelines and requirements of private certifications and standards.

Secondly, the supply chain is increasingly characterized by pronounced power asymmetries. Large distributors exert considerable control over pricing and contractual conditions, often to the detriment of smaller producers. These producers frequently find themselves disadvantaged, negotiating unfavorable terms dictated by brokers and large retailers, which exacerbates existing inequalities already existing along the supply chain. To this extent, it emerges how within the organic supply chain the role of third-party certification bodies has been central in strengthening the dominance of large producers and retailers, exacerbating already existing power asymmetries along the value chain. To this extent, larger corporations, increasingly dictate market guidelines and standards, often to the detriment of smaller producers. Aligning with the observations by Omar and Thorsøe (2023), despite the EU initiatives, such as the Farm to Fork Strategy (F2F) and the Common Agricultural Policy (CAP 2023-2027), which aim to empower farmers, the rise of certification bodies has indeed largely benefited agribusiness giants. Consequently, organic and quality certifications emerge as additional layers of market intermediation, controlled by private institutions and dominant firms. This dynamic might create substantial barriers for smaller actors, who face challenges such as the high costs of transitioning to organic or sustainable practices (e.g., biodynamic farming) and the need for separate processing lines, favoring larger producers capable

of absorbing these costs through economies of scale. Moreover, the dominance of private certifications has redefined competition within the value chain, empowering larger firms that maintain close ties with major distribution chains, which effectively govern the supply chain.

The chapter also highlights the implications of green transition policies such as the Italian PNRR aimed at promoting a restructuring of important segments of the agri-food supply chain such as that of wholesale agri-fruit markets. While these efforts aim to integrate and address an increase of environmental sustainability into the supply chain, they often overlook deeper economic inequalities, especially concerning labour standards and labour conditions of workers employed along the chain. To this extent, the reliance on subcontracting practices to reduce costs, often perpetuates precarious working conditions, undermining the efforts to establish fair labour standards and affecting particularly migrant workers who represent the majority of the labour employed along the supply chain. While the increased focus on environmental concerns and the promotion of higher levels of environmental sustainability is often seen as a source of pride both by the management structure of fruit and vegetable companies and markets, the focus of internal programmes and certifications tends to prioritize environmental standards, while social compliances and labour conditions are overlooked, especially considering outsourced and subcontracted workers.

Lastly, recalling the approaches of de Castro Pericacho et al. (2021) and Loconto (2017), the increasing reliance on private certifications introduces a new layer of governance that can contribute to undermine the traditional state control resulting in a further strengthening of unequal power dynamics, wherein large retailers can redefine market regulations, often prioritizing their interests over those of smaller producers and laborers.

In conclusion, while the transition towards a greener and more sustainable agri-food supply chain is underway and trailed by governance policies and top-down approaches (such as that of the Italian PNRR), this process is fraught with significant contradictions, particularly with regard to power relations, working conditions and the adequacy of regulatory frameworks. The following chapters move deeper into the exploration of these contradictions, particularly looking at the micro-level exploring how these trends affect labour conditions of migrant workers at both the production, packaging and logistics level.

Chapter 6. Working along agri-food supply chains in the corporate environmental food regime: fragmentation, intermediation and control

Introduction

The central role of migrant labour within the agro-industrial supply chain has been extensively discussed throughout this work. From migrant workers employed in the fields, to those employed in packaging, processing and logistics warehouses, the agro-industrial sector heavily relies on migrant labor, which is sourced both from European, and non-European countries. However, the specific forms and dynamics of employing migrant workers, very significantly depending on the type of work, the stage of the supply chain, and the stakeholders involved. Each of the contexts analyzed follows its own rules and logics, albeit interconnected with the other stages of the supply chain and shaped by broader macroeconomic dynamics governing the agro-industry.

In this chapter, the analytical framework proposed by Baglioni et al., (2022) is adapted to the context of this research (Table 1, Chapter 3) in order to analyze the materiality of working conditions in greater detail. The sphere of production (P) is therefore examined in depth, while the dimension of ecology remains central (E) as the objective is to unveil the transformations of labour conditions within the framework of the corporate environmental food regime (Friedmann, 2005) and of the green transition.

According to Baglioni et al. (2022:88) the starting point for labour regime analysis is the study of the labour process and the social division of labour. Therefore, this chapter moves around four main questions: (1) How are workers employed? (2) Who is employed and where? (3) For what tasks? (4) And how are they managed and controlled?

Therefore, the chapter explores how workers are employed across the different segments of the supply chain, identifying the power dynamics and asymmetries at play, the tasks and roles associated within each stage, and the ways in which control, authority, and mobility are exercised both by workers and managers. This approach sheds light on how positions of power and labor arrangements are redefined and renegotiated by workers themselves through processes of organization, subjectification and, at times, resistance. Furthermore, it examines how certain

elements, such as labor intermediation, assume varying roles and forms depending on the specific stages of the supply chain and on the specificities of the context. This micro-level perspective seeks to uncover not only the structural dependency of the agro-industrial sector on migrant labor, but also to unveil the strategies employed by workers to navigate, resist and reshape their positions within this complex and fragmented system. Through this lens, the chapter aims to offer a possible understanding of the relationships that exist within the agro-industrial sector from the bottom, while exposng the systemic inequalities and power asymmetries that underpin them.

The chapter therefore delves into the impacts of restructuring and the reorganization of the agri-food sector, as analyzed in the previous chapter, on labour conditions and labour processes across key segments of the supply chain: greenhouses, packaging warehouse, and fruit and vegetable markets. It examines how work is structured within different workplaces and contexts and highlights three critical trends shaping labor practices.

The first section illustrates how the stratification of local migrant workers – especially in the context of the Transformed Littoral Strip – has favored the creation of differentiated labour markets. To this extent, the initial part of the chapter examines the differentiated positioning of migrant workers based on their nationality and migration pathways, focusing on the intersection of labor dynamics and migration policies within the agri-food context. It also considers how this sector, which has traditionally depended on cheap and flexible workforce, is significantly affected by the hierarchical structure of migration policies which have given rise to stratified workers, creating disparities in wages and employment opportunities. These interrelations are explored within the various segments of the value chain, revealing how they affect worker agency and mobility strategies. Second, the chapter explores the role of standardized production processes - often dictated from the requirements of certifications and quality standards, or from the demands of large retailers and supermarket chains - in shaping and influencing both labour practices and production methods.

The second section focuses on the enduring significance of labour intermediation, showing the different forms that intermediation can assume according to the contexts, therefore leading to differential employment forms and contractual arrangements.

The third section elaborates on how workers are employed within the different context under analysis, showing how different forms of control are put into practices by both workers and employers, and how they are particularly influenced by the interactions with other supply chain

levels. This sections also examines the interplay between managerial and employer strategies to exert greater control over labor and the responses developed by workers to improve their working and living conditions.

However, before analyzing the problems and main issues that emerged from the fieldwork, it is crucial to make some preliminary remarks, particularly concerning the research conducted in Sicily and the existing literature that has focused on the employment of migrant labour in this region. In recent years, the scientific community's interest in the productive system of the Ragusa province has resulted in a substantial body of research examining the forms and conditions of labor in this area. Notable contributions include those by Valeria Piro (2020, 2018, 2017, 2016), and Giuliana Sanò (2018, 2017), who have investigated the intricate relationship between the body and labor within the greenhouses of the Transformed Littoral Strip. These scholars highlight how workers' representations and use of their bodies in the workplace can act as forms of resistance against the pressures and constraints typical of greenhouse labor and packaging warehouses. Furthermore, they analyze workplace dynamics as characterized by conflict and competition, demonstrating how such interactions – often shaped by aspirations of social mobility - have led many workers, particularly those of Tunisian origin, to transition into small-scale agricultural entrepreneurship (Ibid, 2017).

Other significant studies (Palumbo and Sciurba, 2018; Massari et al. 2024; Caruso et al., 2021) have focused on the experiences of female workers, primarily of Romanian and Tunisian origin, emphasizing the isolating and segregating nature of the work environment. These studies particularly underscore the economic dependence of women on employers, husbands, or partners. Such findings prompt the need for an analytical approach that incorporates a gender perspective into the study of labour in this context. Additionally, the work of Anna Cortese and Rita Palidda (2020), explores the productive and reproductive relationship in which migrant workers—especially those of Tunisian and Romanian origin—are embedded. Their study sheds light on the bargaining and negotiation dynamics that workers engage in to adapt to an environment marked by fluctuating working conditions and high levels of mobility.

Therefore, concerning the data and the information collected in Sicily, this chapter does not aim to provide an exhaustive description of the labor context of the Ragusa province. Instead – together with Chapter 6 which is much more focused on the dimension of social reproduction - it seeks to highlight the profound interconnections between the various spheres identified in the theoretical

framework proposed by Baglioni et al. (2020), as illustrated in Chapter 3. The chapter will therefore explore the forms of mobility power and agency exercised by migrant workers, with particular emphasis on the complex interactions between the temporal and spatial dimensions of labor within the increasingly industrialized and globalized value chain. Over recent decades, this value chain has undergone significant restructuring, largerly driven by a growing prioritization of environmental sustainability. To this end, the chapter revisits some key elements concerning the composition of migrant labor in the Transformed Littoral Strip and within the agri-food markets of Bologna and Pauda, to unravel the complexities of the region's labor regime and identify connections and continuities between its various spheres, particularly with other segments of the global value chain, such as that of fruit and vegetable markets.

1. Migrant labor in the Transformed Littoral Strip

The role of migrant labor in the Transformed Littoral Strip is particularly evident, and it assumes characteristics that are primarily shaped by the specificities of greenhouse production. This production model has made Sicily and particularly the province of Ragusa, the area with the highest concentration of greenhouses in Italy. Over the past decades, the number of greenhouses in this region has tripled, resulting in significant transformations in the composition of agricultural labor. Numerous studies have analyzed the evolution of agricultural work in this context (Sanò, 2018; Piro, 2020; Cortese and Palidda, 2020), highlighting how one of the central elements contributing to the structural and permanent nature of migration in the Ragusa area is the destagionalization of agricultural production. Greenhouse agriculture, characterized by a continuous production cycle, has therefore favoured the presence of a stable, non-seasonal workforce. Supporting this observation, data compiled by INPS[54] for 2021 on temporary agricultural workers in the province of Ragusa reveal that, out of a total of 29,778 registered workers, 14,772 were Italian citizens, while the remaining 14,006 were of migrant origin.

[54] INPS data, however, do not consider irregular or illegal situations regarding the working and living conditions of many agricultural laborers. Among the agricultural workers interviewed during the research period, the majority – both Italian workers and those of foreign origin – reported working without any contract or under irregular contracts, where the number of working days and the salary declared on the paycheck do not accurately reflect the actual wages received or the days effectively worked. It shouls also be noted that residency often becomes a point of negotiation or irregularity. INPS data do not consider irregular migrants or workers who, despite being employed in the province of Ragusa, have their official residence in municipalities in other provinces.

Greenhouse farming has thus had a decisive impact on both the development and transformation of the agricultural sector toward an increasingly intensive and industrialized model and on labor practices and relationships, often marked by dynamics of exploitation of foreign labor (Sanò, 2015: 55). Since the 1970s, with the spread of greenhouses and protected agriculture, the province of Ragusa has become a strategic destination, particularly for Tunisian migrants from the Littoral areas of Sousse, Mahdia, and Sfax (Figure 13). Tunisian migration to the province of Ragusa has indeed deep historical roots and was initially facilitated by the geographical proximity between Tunisia and Sicily and the initial absence of particularly restrictive regulations on movement and residence in European countries[55]. These factors, combined with year-round agricultural production requiring waged labor throughout the year, have progressively solidified the Tunisian presence in the region, making it today the largest foreign community in the province of Ragusa.

[55] According to Anna Cortese (2020:92), Tunisian men have consolidated their presence in the Ragusa area by trying to combine their role as breadwinners with the guarantee of a fairly satisfactory standard of living for their families, thanks to a strategic use of mobility between Sicily and Tunisia that has managed to adapt quite effectively both to the evolution of Italian and European migration policies and to economic changes and crises. Initially, Tunisian agricultural workers were able to take advantage of the more tolerant migration policies by combining work or productive activities, sharing at a transnational level not only in terms of remittances, but also through the sharing of benefits for access to welfare, subsidies and family allowances. The affirmation of more restrictive migration policies has subsequently favoured a progressive stabilization of family units (also because many of the arrivals in Italy took place thanks to the use of the family reunification mechanism) and, therefore, also a progressive adoption of the local community's way of life and work. Finally, in recent years, as migration policies have become increasingly restrictive, different strategies have emerged, sometimes aimed at securing the renewal of the residence permit for the head of the family, and sometimes aimed at returning part or all of the family to Tunisia, with periodic transfers to the Ragusa area.

Figure 12. Map of Tunisia.

The main departure areas of farmworkers employed in the Transformed Littoral Strip are marked in red.

According to the 2023 annual report on the presence of migrants in Italy (Italian Ministry of Labor, 2023), the significance of the Tunisian population in the Transformed Littoral Strip is further confirmed by the territorial distribution of economic remittances sent to Tunisia. In particular, the province of Ragusa ranks among the main origins of remittances, second only to Rome. Additionally, ISTAT data for 2021 indicate that, despite representing only 6.3% of Sicily's total surface area, Ragusa ranks third among the provinces in the region for the concentration of foreign populations, accounting for 15.4%. The enduring presence of Tunisian migrants in the province of Ragusa transcends their contribution to the local labor market. This is also evident in the emergence of symbolic and meaningful spaces, such as places of worship, community centers and

gathering sites[56]. These spaces stand as testimonies to a deeply entrenched migratory history within the region. However, this presence has occasionally provoked widespread racism among residents, often characterized by a patronizing form of pity that implies a perceived reluctance or inability of migrants to integrate into the local community.

> "Yet, there are a lot of foreign workers here, thousands and thousands of people working here, but left abandoned to themselves. […] They have nothing, while the Italian emigrant in Belgium was making his Italian club in Belgium, in New York, the only thing they can do here is to create a mosque. Because the North African Arabs have been here for a very long time, they have organized themselves and made a mosque in a house in Vittoria that was bought by Islamic associations and used as a place of prayer and as a mosque. But otherwise, they are left wild"
>
> (Interview to an organic and conventional producer, Niscemi, June 1st, 2023)

These elements serve to reinforce the sense of belonging and underscore the pivotal role of the Tunisian community in the local social and economic fabric. The prolonged presence of the Tunisian population has, in fact, resulted in comparatively greater opportunities for social mobility than those available to more recently arrived migrant populations. This is evidenced by the findings of the interviews conducted during the period of participant observation at the Caritas Presidium in Marina di Acate, which revealed that a significant number of long-stay Tunisians have embarked on a path of self-employment, starting their own businesses, renting land or working as sharecroppers (*mezzadri).*

> "The Tunisians workers who have been here for so long have now become small landlords, owners of greenhouses. Sometimes they rent greenhouses where they become tenants even though they're not the real owners. They are perhaps tenants of the previous owners who has decided, for instance, not to invest in

[56] In Giuliana Sanò's research (2018:138) it is possible to further explore how Tunisians workers tend to redefine the spaces within which local politics and employers' economic strategies act upon them. In particular, in the context of Vittoria, Piazza Manin, also known as "the Tunisian square," plays a central role. The square is indeed not only a place where workers sometimes try to find contacts for a day of work (a phenomenon that overtime became less common given that the demand for labour is quite high in the area), but a place where informal economic and trade relations are also created.

agriculture anymore and has therefore rented out the greenhouses. Or they become owners of small plots of greenhouses".

(Interview with the coordinator of the Caritas Presidium in Marina di Acate, June 8, 2023)

Notwithstanding the considerable obstacles these trajectories have faced, they have facilitated the upward social mobility of numerous families, enabling them to join the ranks of the local small agricultural middle class. Nevertheless, the capacity for social mobility is constrained by the persistence of racial discrimination, which continues to differentiate the position of Tunisian entrepreneurs from that of their local counterparts. As Anna Cortese (2020: 90) observed, the migratory trajectories of Tunisian workers unfold along two distinct paths. On the one hand, there is a vertical movement, which reflects career advancement and, for many workers, a transition from wage labour to land ownership. Conversely, there is a horizontal movement, typified by diversification into disparate sectors of employment. This dual aspect of social mobility is particularly evident in intergenerational analyses, which reveal tensions between the authority exercised by patriarchal heads of households and the aspirations of younger generations. Tunisian youth express aspirations and desires that are in conflict with the traditional roles dictated by the breadwinner model. These dynamics reflect a broader process of transformation that impacts not only the economic conditions but also the cultural and familial structures within Tunisian communities.

"In most cases, boys and girls, children of farm labourers or smallholders, are forced by their parents to go to accountancy school or to the agricultural institute to one day work in the fields or take care of the administration of the family business. In some cases, this obligation imposed by parents has also encouraged their children to drop out of school. Last year there was a boy who joining our activities who wanted to become a mechanic, but his parents were against this and wanted him to go to the agricultural institute. In the end, in order not to enroll in the school he didn't want to do, he just dropped out from school and failed the eighth grade".

(Interview with the coordinator of the Caritas Presidium in Marina di Acate, 8 June 2023)

It therefore emerges that both small entrepreneurs and the children of agricultural labourers in the province of Ragusa perceive education as a crucial factor in facilitating social mobility. On the

one hand, education serves a conduit for consolidating and reproducing familial roles within the local context. Conversely, it provides an avenue for individuals to challenge these roles, envision new possibilities, and pursue alternative perspectives. The meaning of education and school emerged in a clear way from the experience of participant observation conducted during the after-school activities of the Caritas Presidium in Marina di Acate. The case of a young Tunisian boy illustrates how education can serve as a conduit between individual aspirations and the constraints imposed by familial and occupational circumstances.

1.1.The stratification of migrant experiences in the Transformed Littoral Strip and the impact on competition and labour mobility

The trajectory of social mobility for agricultural workers is closely linked to the temporality and nature of their migratory experiences, which vary significantly depending on national origins. In the province of Ragusa, Tunisians workers have historically benefited from a migration process that has facilitated greater stability and gradual integration into the local context. However, the situation is markedly different for other migrant communities, particularly those who arrived more recently and under precarious conditions. A pertinent example is the influx of workers from Eastern Europe, particularly from Poland and North-Eastern Romania, which commenced in the early 2000s. This migration occurred concurrently with the anticipated expansion of the European Union (EU) between 2004 and 2006. The enlargement of the EU has resulted in increased alignment and harmonization of member states' policies, as well as a progressive differentiation in individual mobility. This process has redefined both visible boundaries, such as geographic borders, and invisible yet highly consequential boundaries, such as wage disparities within the same geographic area (Gambino and Sacchetto, 2007). Over the past decade, there has been a notable increase in the number of migrants from a variety of countries, including those from sub-Saharan Africa, West Africa, the Middle East, and certain Asian countries, which has contributed to a more diverse workforce in the province of Ragusa. The recent arrivals, distinguished by varying temporalities and integration processes, have provided new opportunities for examining mobility not only in social terms but also in labour and geographic contexts. Migrants from sub-Saharan African countries frequently enter through ordinary or extraordinary reception systems, or as part of integration projects for asylum seekers and refugees (SPRAR, CAS) (Gentile, 2021). The mobility of these workers is therefore contingent on, and frequently constrained by, their legal

status and documentation. The increasing bureaucratization of migration flows is driven by the need for production to be able to rely on the availability of just-in-time labour, not only for inventory but also for human resources (Ibid). Consequently, state and institutional structures persist in exerting top-down control over migratory flows, thereby undermining migrants' autonomous strategies.

As some authors have observed (Lo Piccolo, Todaro, 2018), this "anthropological revolution" has had a significant impact on the organization of rural spaces and their relationship with urban dimensions. Furthermore, it has also influenced local social dynamics, which have been shaped by the growing migrant population and its corresponding labour force. This substantial presence, predominantly composed of working-age men, has had a significant impact on the wage labour market, occasionally giving rise to tensions among different groups of workers. Such tensions emerge from the ongoing shifts in wage and contractual conditions, as well as the perception of competition within the labour market. In her study on the paradoxes of Italian migration policies, Anna Maria Cortese (2020:74) emphasizes that the “interconnection between the differentiation in labour demand and employment relationships, and the stratified labour supply, is shaped by a complex array of factors. These include the historical succession of migratory flows and their regulation, as well as the social and cultural profiles of national groups, the individual and familial characteristics of migrants, and the human and social capital resources they are able to mobilize”. In this context, the migratory and labour trajectories of Tunisian and Romanian groups, which together account for over half of the foreign population in the province, are of particular significance. Despite their shared prominence in the local agricultural labour market, the integration strategies of these two groups differ markedly, shaped by the disparate regulations of European migration policies. Evidence from the fieldwork indicated the existence of a distinct rivalry between Tunisian and Romanian workers, which has been intensified by the impact of EU regulations on the wages of non-EU citizens. This rivalry highlights the crucial importance of migration policies and their interaction with the dynamics of the local labour market.

> “No one changes anything here; that’s how it works in Sicily. I arrived in Italy in 2004 through the flow decree. Nobody wants to work in agriculture here, it's only us (the migrants, the Tunisians) who do that, so they can treat us badly. I work in a nursery and my paycheck says that I get paid 57 euros a day, but actually I get 45. My colleagues who are Italian get 57 instead. Now it's better

> because the Romanians are leaving, and salaries have gone up again. But when they were here, when they arrived, at the beginning we were paid 15, 20 euro a day, while now we get 40, 45 euro. Because they (Romanians) often come in pairs, husband and wife, and (the employers) hire two of them at thirty euro a day without a contract. While the others at those conditions they don't accept the job. So maybe during the high season the employers preferred Romanians because they could pay them less, now that the Romanians are leaving, the conditions are improving... and so we (the Tunisians) are those who are mostly employed in agriculture. Even those who arrive 'illegally' or by boat do not work in agriculture for long. They are here for a couple of years at most and then they leave. In the countryside we Tunisians stay because no one wants to work in agriculture.
>
> (Interview with Tunisian farm labourer, Marina di Acate, 4 July 2023)

The impact of these social and labour stratifications is evident across a range of dimensions, including wage disparities, the heterogeneity of migratory trajectories and gender differences. These factors frequently give rise to contradictory and, on occasion, paradoxical effects, the examination of which requires careful attention. To this extent, it is important to consider the role of migration policies, which extend beyond the regulation of migration flows into Europe and Italy to significantly influence the forms of labour and employment. These policies establish particular legal categories, including citizenship, residence permits, and asylum requests, which delineate distinct spheres of action and levels of bargaining power. As Anderson (2010) notes, such institutional mechanisms contribute to the reproduction of an "*institutionalized uncertainty*" giving rise to a precarious workforce confined to specific segments of the labour market. This precarity manifests in the form of underpaid labour characterized by high flexibility, frequently aligned with the demands of the productive system. The differentiation of legal statuses attributed to workers based on their country of origin gives rise to substantial disparities in terms of employment opportunities, wage levels and mobility, especially when comparing extra-EU workers (e.g., Tunisian, Moroccans and workers from Sub-Saharan Africa countries) with EU citizens as Romanian workers. These dynamics and strategies are often paradoxical. To cite one example, the initial competitiveness of Romanian workers, was largely rooted in the seasonal nature of their migration, which was dictated by the three-month tourist visa permits. Moreover, after 2002, Romanian workers no longer needed a visa permit for travelling and moving throughout EU

countries. However, following Romania's accession to the EU, a prolonged precarity effectively confined many Romanian workers to agricultural labour in the countryside. As Gambino and Sacchetto (2007) argue, from a subjective perspective, this migration reflects an attempt by these actors to assert their roles in social and political contexts where they can negotiate new labour relations. These negotiations exploit the necessity for labour that can be deployed at short notice within the context of production and industry, which are subject to constant reshaping by the presence of borders and the formation of social groups. The competitive entry of Romanian workers into the local labour market, facilitated by their newfound freedom of movement within the EU, exerted considerable pressure on Tunisian workers. The increased availability of Romanian workers willing to accept lower wages without contracts, protections, or social guarantees not only exacerbated the precariousness and illegality of working conditions but also marginalized many Tunisian workers in terms of wages and opportunities. In the subsequent phase, the downward competition leveraged by Romanian workers, while enabling them to integrate more seamlessly into the labour market, resulted in the perpetuation of precariousness and marginalization. This dynamic frequently exploited labour mobility and entailed compromises that were more onerous than the work experiences of Tunisian migrants.

Another critical dimension concerns the response of medium and large enterprises, particularly regarding the sourcing of low-cost labor. Operating on a transnational and international scale, these enterprises have contributed to rendering employment arrangements increasingly fragmented and nebulous. This fragmentation has, in turn, created opportunities for new actors to enter an already-transforming landscape of labour and production relations. In the context of Ragusa, however, the continuous demand for labour has served to mitigate the reliance on more institutionalized forms of mediation. In contrast, informal networks, such as word-of-mouth (*passaparola*) and direct personal connections, have historically constituted the principal means through which agricultural workers secure employment. This reliance on informal mechanisms reflects the adaptability of both workers and employers to local socio-economic conditions, even in the context of broader systemic transformations.

> "When I arrived here, I was supposed for a friend of a cousin who had greenhouses. I was told he could hire me right away to harvest tomatoes in his greehouses, but this was not true. So, I looked for a job and I found it straight away. I worked for six months in a greenhouse near contrada Alcerito county,

> then I left because the pay was very low, and I was working a lot. I changed many places always within greenhouses, sometimes in warehouses, but it was very tiring there. Before working where I work now, I even had a contract in a nursery (*vivavio)*, but I changed quite soon because the bosses treated us badly and paid us little there…so I left".
>
> (Interview with Romanian worker, Marina di Acate, June 24, 2023)

The testimony of this worker clearly demonstrates how the freedom of movement granted to EU citizens, who are not subject to restrictive migration policies such as those imposed by Italy's Bossi-Fini law, results in enhanced labour mobility. This freedom eliminates the need to accept insecure working or living conditions in order to obtain or maintain a residence permit. Such mobility contributes to the distinctive feature of labour turnover in the work experiences of these workers. It is therefore imperative to examine the relationship between migrant labour and turnover in order to gain insight into the significance and demands of migrant workers in relation to mobility (Alberti and Sacchetto, 2024). Conversely, migrant labour is frequently exploited by employers in order to gain access to a flexible and low-cost workforce. Conversely, voluntary turnover, which is typical of workers with greater mobility, represents a choice that allows them to select desired jobs without compromising their right to reside in the European Union or access welfare benefits. As Alberti and Sacchetto (Ibid) argue, an analysis of labour turnover, which is prevalent in numerous sectors with a significant migrant workforce, must extend beyond the notion of this phenomenon as mere "*individual opportunistic behaviour*". Instead, it is vital to consider the role of this phenomenon in the context of transnational mobility and its conditioning by migration policies and specific production contexts. In the specific area of the Transformed Littoral Strip, characterized by a constant demand for labor and informal recruitment practices often based on direct contacts or informal networks, labour turnover intertwines with dynamics of solidarity among compatriots. The decision to leave a job is therefore not solely motivated by the rejection of unacceptable working conditions, it is often driven also by a refusal to accept forms of racial or gender segregation, which manifest both within and outside the workplace. This is evidence by interview of this Romanian women employed within a greenhouse, and by a Senegalese worker.

> "Once it happened to me, that while I was working in another company, the employer dared to touch my ass. And I, as I was harvesting vegetables and was grabbing scissors, I pointed the scissors at him and said, "don't you ever try to

touch me again or I cut it (the penis) right off". From that day I left and never went back there"

(Interview to a Romanian female worker. Vittoria, June 30, 2023)

"In the workplace where I was hired, I was like a team leader, responsible for a group of workers employed in a greenhouse. Then there was (in the company where he used to work) also an Italian manager who was above everyone else. But when there was something wrong, something missing, he always makes the blacks, the colored workers do it, while the Romanians, the whites, he gives them the best work. And that's not ok with me. We are all workers; inside work you cannot divide and have different treatments on the basis of the skin. Many times, I told the employer that this company cannot work like this. Because many times, when there was something wrong, then it was the fault of the Africans, if there were things on the ground "Ah Africans threw it on the ground, and they didn't throw it in the rubbish". But I said many times to the boss "You have to pay your workers, all the same, and you can't just trust what other workers tell you, because you're not here and you can't start yelling at the Africans when others tell you it's their fault, because you are not always here". Because he didn't pass every day where they worked, so he had to ask us, even me, but he immediately agreed with the other Romanians and Italians. Always even my African brothers would ask me why he was doing this. They would ask me that, even when they didn't speak Italian because they understood it very well that they always got angry with the Africans. And I would always get in front and argue with the others. But I couldn't take it anymore. So, I said to the others, "'I don't want to continue like this, if you want to continue go ahead, I prefer to stay out of work because there is no respect here. If you want to continue...but I have made my decision, and I am leaving'".

(Interview with Senegalese farmworker. Vittoria, July 5, 2023)

From this perspective it is therefore useful to recall the concept of mobility power in the conceptualization of Alberti and Sacchetto (Ibid) who conceived labour mobility as an inevitable terrain of contestation meaning that the transnational market constantly needs to renegotiate and redefine the way labour is exchanged. To this extent, this is what makes the mobilization of workers – and particularly of migrant workers – a form of collective unorganized action aimed at constantly renegotiate and redefine the ways through which work is exchanged within international

labour market (Ibid)[57]. The element of uncertainty associated with migrant mobility thus represents the possibility of challenging the fragmentation of work and the attempt to make every process predictable and controllable. This element of unpredictability cannot be reduced solely to the material conditions in which migrants work. It also depends to a significant extent on the development of social relations with other migrant or indigenous workers. Consequently, it extends far beyond the workplace, entering the spaces of reproduction as well (Ibid). In this sense, Alberti and Sacchetto (2024) posit that mobility power is not merely an individual phenomenon, but rather a collective process. They argue that labour mobility acquires a social dimension, transforming collective practices, formations, and networks of mutual support. This, in turn, presents a challenge to the management and control of capital. From this perspective, during the course of the field research, a twofold issue pertaining to the availability of the workforce emerged quite often among the companies and entrepreneurs. On the one hand a shortage of Italian workers was observed; on the other, a specific phenomenon concerning foreign labour, particularly Romanian labour, emerged. Indeed, in recent years, there has been a notable increase in the number of Romanian workers, taking advantage of their freedom of movement within the EU to migrate to countries offering higher wages. Indeed, migration policies, welfare policies and the workers agency and decisions of workers have a continuous impact on the composition of work and on labour relations. The phenomenon of transnational mobility has indeed been facilitated using informal intermediation, which have enabled contact between workers and employers in novel contexts. Nevertheless, this dynamic has also intensified the challenges faced by local companies in maintaining a consistent workforce, therefore making workforce management an even more complex challenge.

> ‘‘The first to come to Sicily were the North African Arabs. Then we had a small phase of Poles and then a large number of Romanians. And we had them for eight or nine years, a lot of Romanians. Some were paid very little. Generally speaking. Others well. Some [employers] took advantage, but slowly they were all regularized. Then they all left. And within two years almost all of them disappeared. And we were left without workers. So, we, for example, started to

[57] In this regard, the authors (Alberti and Sacchetto, 2024) place significant emphasis on the pivotal role of migration policies, which are considered as instrumental and supplementary for the constant reproduction of labour, capital, information and knowledge that is intrinsic to contemporary economies. In this context, migration policies must be sufficiently flexible and adaptable to align with the evolving needs of an unskilled and cost-effective workforce. Therefore, migratory policies are functional and complementary for the satisfaction of the needs of the capital.

> take a lot of workers in a town nearby, in Niscemi...and now many of our workers are Italian. [...] It's not that they left in a month, they left in two years. And in the meantime, there was also the citizenship income so many Italians were saying they didn't want to work and they preferred the citizenship income. We had at least three or four who did that. Then now since they took it [the citizenship income] away, many have come back. In any case we now have many Italians, proportionally if you look at the workforce, we have employed there are about 20 per cent who are foreigners, and all the rest are Italians. Before it was the other way around. We had 20 per cent Italians and then all the rest were mainly Romanians.
>
> (Interview with agricultural producer, Santa Croce di Camerina, 24 June, 2023)

Thus, it is precisely the diffusion of the migration experience – directly or in indirectly – in the context of Eastern Europe – that has favored the elaboration of migration strategies and forms that are always new and changing over time, often reshaped based on information and stories from other migrants. Around the time of Romania's accession to the EU, the intensification of these flows also favored their relative diversification and intensification, allowing subjects to implement new modes and forms of cooperation. From this point of view, especially in the Romanian population, female migration plays a central role, which will be examined in more detail in the following sections. In this context, migrants leave the country despite the imperative to stay at home to look after their children, thus imposing the times and necessities of their presence or absence both in the spaces of arrival and departure (Gambino and Sacchetto, 2007; Vianello, 2007).

2. Intermediation as a central element in the organization of migrant workers

Chapter 5 analyzes the keyways in which different forms of intermediation influence the relationships between actors and different segments of the value chain. However, intermediation also has a significant impact on the organization and processes of live work. The conceptualization of intermediation as an infrastructure proposed by Valeria Piro (2022) is particularly useful for understanding how it contributes to organize labour mobility, reproducing not only the social structures along the chain, but also those internal to labour relations. In this perspective, the intermediary does not only facilitate the reproduction of social structures, but also contributes to their innovation. From this perspective, many studies have shown how intermediation in

agriculture can take the form of informal labour relations, especially in the production sector (Lo Cascio, 2020; Garrapa, 2016; Leogrande, 2016; Rigo, Dines, 2015; Perrotta, 2014), which are often characterized by high levels of exploitation. In this regard, Perrotta and Raeymakers (2023) introduce the concept of *caporalato capitalism* to describe the central role of caporalato in the integration of migrant labour within global agro-industrial supply chains. However, the nature of intermediation is not uniform: the timing and pace of production determine the nature and the embeddedness of intermediation mechanisms at different levels of the supply chain and in different production contexts.

Intermediation is not limited to the mere matching of the parties involved but is shaped by aspects and factors that go far beyond considerations of optimal price and efficiency and are thus embedded in broader social relations (Enright, 2013). It is therefore useful to integrate this perspective with the concept of circulation proposed by Rioux (2022), who distinguishes between a *circulation policy* - understood as a set of rules and practices that define the processes of selection and recruitment of workers and align the labor supply with specific jobs - and a *policy of circulation* which refers to a broader social context, regulated by State laws as well as migration and welfare policies. These two levels contribute to defining the minimum conditions for labor mobility and, in the case of migrant workers, facilitate the reproduction of a flexible, low-cost, and precarious workforce in which intermediation often plays a central role, not only in addressing employment needs but also in mediating between different social spheres. For migrant workers, this involves confronting challenges related to housing, obtaining documents, or securing funds for travel (van de Broek et al., 2015; Andrees, 2020).

In Italy, a significant portion of the agricultural workforce is recruited by informal intermediaries (gangmasters), who play a central role, particularly in areas with increasing land concentration and monoculture farming, where the demand for cheap labor peaks during the seasonal harvest periods (Hellio, 2017; Rogaly, 2008). However, in areas such as the province of Ragusa, where agricultural production is mostly destagionalized and characterized by continuous production cycles, intermediation linked to gangmaster practices is less prominent. In these contexts, a form of *grey labor* emerges—where work is formally recognized through contracts which are not fully regularized, and often the actual working hours exceed those recorded (Caruso et al., 2021). The following sections will deeply examine how instruments such as the agricultural unemployment subsidy is structurally adopted to reproduce these irregularities in the Ragusa area.

Rather than a radicated *caporalato* system, in these territories an occasional gangmaster model predominates, where workers' wages are deducted for services such as transportation or administrative assistance[58]. Simultaneously, alternative forms of intermediation have emerged across various levels of the supply chain, fostered by growing asymmetries in relations between companies that have gradually strengthened their control over the provision of labor. In this context, *third parties* are playing an increasingly central role, intervening in labor management through contractual dynamics that allow companies to separate the use of labor from the associated responsibilities (Bubbico et al., 2022). The following sections, therefore, focus on the two segments of the supply chain where the research was concentrated—production and logistics—where mediation and intermediation processes develop and consolidate, influencing and conditioning the organization of labor and its processes.

2.1. Labour intermediation in the Ragusa agri-food sector

During the months of fieldwork spent in Vittoria, the centrality of intermediation was particularly evident, and emerged continuously especially during the afternoons spent at the Caritas Praesidium in Marina di Acate. In this specific context, characterized by a deseasonalized production and continuative which, as discussed in the previous sections, has favoured a stable and long-term settlement of migrant workers over time, the forms of intermediation generally associated with agricultural labour, such as *caporalato*, play a secondary and rather marginal role. This marginality is mainly due to the continuity and stability of labour relations, resulting mainly from the seasonal nature of agricultural production. This dynamic, however, does not imply an improvement in the working and living conditions of the thousands of migrant workers who remain confined to the countryside. As Vincenzo La Monica, coordinator of the Caritas Presidium in Marina di Acate, points out, this situation generates a series of complex problems and needs to which local administrations and the support projects promoted by non-governmental organizations do not always manage to respond effectively and comprehensively.

[58] This forms of *caporalato of service* are more deeply explored in Chapter 6, as they mostly deal with forms of intermediation that are mostly related to the access to public daily services and transportations

Figure 13. Working within a greenhouse in Marina di Ragusa

(Picture by Giulia Magnano)

"Here caporalato, as it is understood traditionally as a form of intermediation between employer and worker, doesn't really exist. Or at least it has a very nuanced characteristics compared to other areas of Italy. Instead, there are a whole series of intermediary figures that concern services, starting with passages of transport. So, there are a series of abusive taxis, people who deal with the processing paperwork or the retrieval of fictitious work contracts to allow the renewal of residence permits to enter Italy, find a house and so on. So we are faced with a stratified set of problems, and usually the people who are beneficiaries of our services have a stratified set of needs. This is a bit of a general overview, and it all stems from the labour issue, because if these people were paid regularly, they could probably rent a house, buy a car, move around. But a whole series of problems derive from the employment issue that often also become preponderant with respect to the employment aspect because they really concern people's loneliness, psychological well-being and work".

(Interview with the coordinator of the Caritas Presidium in Marina di Acate, 8 June 2023)

Figure 14. View of some greenhouses in the Ragusa province

(Picture by Giulia Magnano)

The above extract clearly highlights the continuity and interdependence between the four spheres - production, social reproduction, circulation and ecology - that make up the labour regime (Baglioni et al., 2022)[59]. In particular, it highlights the strategic function of the reproduction of

[59] Very similar to the labour context of the province of Ragusa is that of the Piana del Sele in Calabria. Avallone's (2017) research in the area revealed several continuities with that of the Ragusa province especially given that greenhouses and deseasonalization of work are an important characteristic of labour in both the areas. On this regard, Avallone (ibid, p.218) has also stressed how in the area "the social regulation of labour is organized around a system

forms of intermediation and stratification, which are seen as useful tools for generating a plurality of labour regimes aimed at the valorization of a marginalized, underpaid labour force willing to accept precarious and inadequately paid working conditions. In this context, although the supply of labour is constant and significantly high, *caporalato*, as a form of intermediation traditionally associated with the agricultural labour, is far from dominant, at least considering the way in which workers are recruited. However, factors such as the marginality of housing, the interaction between long-established migrants and newcomers, and the difficulties of movement within a provincial area - mainly due to the inadequacy and lack of transport - contribute to the emergence of alternative forms of intermediation[60].

> "In this area, in the province of Ragusa, compared to what you might see around southern Italy, caporalato is not even there. By 'caporalato' here we mean a person that you, the company, appoint to recruit workers. Then you pay that person who does what he wants with the worker, he pays them as much and when he wants. Here, however, we generally have direct contact with the workers. But not only here on the farm, in the whole Transformed Littoral Strip this thing does not exist. We have people, here who come and work here for the 4, 5, 6 months of intensive work that we have because we work in cycles in the greenhouses. Moreover, most of the people who work for us have often been here for 20 years; so, by now they are specialized labourers...the caporalato is more related to manual labour"
>
> (Interview with organic farmer, Marina di Ragusa, 25 May, 2023)

Although caporalato is not a predominant element in the territorial context under consideration, and although agricultural labour is largely regulated by contracts, forms of *grey labour* persist. The working and wage conditions of migrant workers employed in the agricultural sector remain far from favourable, and the forms of intermediation are articulated in stratified and diversified ways, mainly along ethnic, gender and migration experience lines. These dynamics show how the

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of informal intermediation, which encompasses virtually all aspects of a migrant labourer's life: from recruitment, and the organization and supervision of labour, to the practices employed to obtain a regular permit of stay and to access housing, public health service and credit". On this regard, the interrelation between the productive and social reproductive dimension is iherefore quite clear and shaped by the social relations that are determined by the context and by migration infrastrcutures.

[60] These, rather than labour recruitment, concern forms of intermediation that are more related to the daily reproduction of workers' lives and will be better analyzed in the following sections.

stratification of the labour force and, in parallel, the forms of intermediation are functional for the organization of living labour and the reproduction of a multiplicity of labour regimes.

As discussed in the previous sections, practices such as the racialization of wages (Battistelli et al., 2018) and the widespread habit of not including in paychecks all the days worked emerge. Such practices favour the consolidation of grey work patterns, which are formally contractualized but essentially irregular. The role played by local actors in the intermediation process should also be considered, even if they operate with the intention of providing support and assistance to migrant workers. An important role is played by the extraordinary reception centres (centri di accoglienza straordinaria, CAS) which, to facilitate the labour insertion process of the migrants they are hosting, they often try to conclude informal agreements with local companies and direct the workers newly inserted in reception projects to these realities.

> "I scout companies from time to time when we need new contacts. So, we can make agreements with respect to the refugees we host here so that they can be placed in the companies, but there is no real protocol. I go and talk directly to the companies looking for work...over the years they often call me too, but usually I look for them. As soon as there's a need I get active, I make a round of phone calls and I talk to the biggest companies, the ones with the biggest business, which are usually the ones that have the best guarantees that they'll pay you. For the rest, you go a little bit by trial and error with the small companies, which are no less. Usually, they are all working under contracts, they are not illegal workers, but in the end, they usually work 'in grey' and the days are never fully declared, only in part. Usually, a part is declared in the payroll, another part in the black. And then, there is unemployment. So, the selection criterion is mostly that of the big companies, then not even the larger companies can guarantee you total legality, but unfortunately that's how it works here in most cases. I once managed to conclude a deal with a company from the NoCap[61]

[61] The international association No Cap was founded in 2017 by Yvan Sagnet, a former agricultural worker in the Apulian countryside. From the very beginning, the association's aim was to promote an economic model and agri-food line aimed at protecting farm labour and tackling the structural causes of labour exploitation in the agricultural sector. The birth of No Cap is rooted in the experience of the strike in Nardò, in the province of Lecce, where in August 2011 a few hundred seasonal workers employed in the harvesting of tomatoes and watermelons began a self-organized strike that lasted for two weeks (Perrotta and Sacchetto, 2013). In the course of the strike, meetings and mobilizations of groups of migrant workers led to the first roadblocks and pickets, which had a significant impact on part of the tomato food chain and attracted the attention of public opinion and the media. The association No Cap - short formula for '*No Caporali*' - then launched a campaign of denunciation and awareness-raising, with the aim of consolidating a network of collaborators aimed at implementing the first pilot projects of a certified ethical supply chain. The aim of these projects is to guarantee fair compensation to producers, while ensuring respect for contracts, workers' rights and safety and security protocols, with a view to promoting forms of "certified ethical supply chain".

> network, but it was a short experience. We managed to get them (the asylum seekers) to work there for two months, with legal contracts, but for a short time... because the NoCap network makes a triangulation between worker-company and large retailers, and the company is usually ensured sales in supermarkets. But without these preconditions, companies usually hire you for only 102 days, which means that at the end you get only the minimum of the unemployment subsidy. Let's say that we usually try to look and make agreements with companies that ensure at least 150 regular days of work, this is usually one of the main criteria we adopt, but usually is a matter of experience, and the workers' who have never worked in the fields when they arrive they are recognized only the bare minimum of 102 days, then they (the owners) raise the days depending on the workers' performances"[62].
>
> (Interview with the responsible of labour aspects for migrants and asylum seekers of the Diaconia Valdese in Vittoria, 25 July, 2023)

As pointed out by Caruso et al. (2021:284), the challenges in finding companies in the Ragusa area that are able to fully comply with the provincial contracts and the minimum union standards has led to a situation where only one local company meets the necessary requirements to comply with the ethical standards set by the NoCap association's project. Consequently, despite the intermediary role played by support and reception organizations - such as Diaconia Valdese[63], which runs one of the main reception centers in Vittoria - fully legal working conditions can only be guaranteed to a limited number of workers, who are employed for short periods, after which

These projects aim to promote legal and transparent forms of labour brokering, countering the phenomenon of caporalato (Caruso et al., 2021) by guaranteeing fair compensation to producers, while at the same time ensuring compliance with contracts, workers' rights and protection and safety protocols.

[62] The mechanism of the number of days that are regularly registered within the paychecks is one of the main issue of negotiations between workers and employers as the number of days gives access to different amounts concerning the agricultural unemployment subsidy. Section 4.2 of this chapter explains the functioning of this mechanism more precisely.

[63] Although the roles of local organizations, labor unions, and projects aimed at providing assistance and support to migrant workers are not central to this research analysis, they often play a significant role in allowing the reproduction of certain dynamics that occur outside the bounds of legality within the local context. In this specific case the intermediary role of the Diaconia Valdese, reproduces a certain level of irregularity and informality in labor relations. This is primarily evident in the preferential employment of asylum seekers and refugees, who are frequently hired under conditions that are far from regular. During the period of fieldwork, the functions of various entities active in the region prompted continual inquiries and reflections. A central theme of these reflections concerned the capacity of these organizations and the diverse projects operating locally, to provide support and assistance to migrant workers. It became evident that their efforts often create minimal conditions for subsistence, effectively sustaining the status quo and safeguarding a system that capitalizes on the exploitation of migrant labor. This system is strategically aligned with the regions' economy, which is heavily centered on agri-food entrepreneurship, leveraging the marginal living and working conditions of workers to maximize local industry profits.

they are often forced to seek new opportunities in companies where working conditions are irregular and characterized by forms of exploitation and irregularity that are already widespread in the area.

In this context, the intermediary role played by the organizations and institutions operating in the area, is specific to a certain segment of the migrant population. In the case of Casa Valdese or the reception centers operating in the Ragusa area, this intermediation mainly involves migrants of sub-Saharan origin, particularly from Senegal, Gambia, Mali and Nigeria. Although labour gangmastering is not the dominant form of labour intermediation in Ragusa, migrants excluded from institutional intermediation networks continue to resort to traditional forms of gangmastering. While this practice is an exploitative and illegal form of labour organization, it does provide immediate access to the labour market. As a Senegalese worker who arrived in Vittoria and was employed in greenhouses within a week of his arrival explained, this dynamic responds to the need to start work quickly.

> "I immediately, as soon as I got here, I started work after a week. When I arrived at Father Beniamino[64]'s I remember it was a Sunday. I started work the following week. I get up early, I go and stand on the road to Acate and wait. So, when the cars pass by, someone stops, *'Do you have to work?*', I speak French and answer, *'Oui, oui, travail, travail'* and so I go to work. 15 euros a day, sometimes even 12 euros a day. At the beginning it was like that, then it started to change, they started paying 25 euro for 8 hours a day, now we get paid 45 euro also. Then now I also have the contract, but in the beginning I didn't, for about three years I was without a contract".
>
> (Interview to a Senegalese farmworker. Vittoria, July 5, 2023)

Forms of intermediation, especially in the recruitment of labour, are closely intertwined with the factors that determine the stratification of the labour force, influencing both the timing of the migration experience and the geographical origin of workers. In this context, it is useful to recall the theory of the embeddedness of the economic sphere in the social sphere and how this helps to highlight the centrality of networks, norms and social ties in explaining the nature of economic

[64] Don Beniamino Sacco is a particularly significant figure in the context of projects that have emerged in recent years aimed at supporting foreign nationals in Vittoria. In 2009, he founded the Buon Samaritano Foundation, a center that provides shelter for refugees and asylum seekers, including women and children, in Vittoria.

exchanges and migratory processes (Piro, 2022; Granovetter, 1973)[65]. From this perspective, the progressive consolidation of communities of Tunisian and Romanian workers in the area has not stopped the arrival of new migrants from the same countries. On the contrary, the new arrivals generally manage to integrate more quickly into the local working environment thanks to the presence of pre-existing networks, often formed by family members or friends already employed in local agricultural enterprises[66]. This dynamic is confirmed by the testimonies collected during the research: almost all the agricultural entrepreneurs interviewed stated that they recruit labour mainly by word of mouth, often initiated by the workers themselves. In this way, workers who are already integrated into the labour market help to facilitate the recruitment of friends or relatives, further consolidating these informal intermediary networks. An additional level of intermediation develops along gender lines, as is particularly evident in the Tunisian community. Here, it is often the husbands or fathers who determine the working conditions of their wives or partners, directly intervening in the forms and conditions of work to which these women are subjected.

> "The weak element in this chain are certainly women, because depending on their national background, they undergo multiple forms of control and exploitation, which are not limited to labor but also affects their personal freedom, their ability to choose, to be free, and to interact with others. We could perhaps delve into this in more detail. While a Romanian woman generally has easier access to the labor market, due to different cultural backgrounds, a Tunisian woman is completely and totally subordinated to her husband, to his will. So, when a Tunisian woman enters the workforce, unlike a Romanian woman who may also access work outside the home and family, a Tunisian or Moroccan woman, let's say a Maghreb woman, mostly works for her husband. Therefore, in addition to the domestic violence often present, there is frequently

[65] In particular, Granovetter (1973;1990) highlights the weakness of the sociological theory of the 1970s, which fails to link the dynamics at play at both macro and micro levels. Rather, he re-centers the role of social networks, migrant communities and the norms and ties that emerge from them, to explain the nature of economic exchanges and migratory processes. Granovetter emphasizes that the key implication of this connection is that individuals' personal experiences are closely tied to broader aspects of social structure, well beyond the scope or control of the individuals themselves.

[66] In this regard, Alberti and Sacchetto (2024:47) emphasize how these networks do not only facilitate migration but also represent forms of control over the mobility of migrant workers. Drawing on literature that highlights the role of community and household practices in sustaining migration, they challenge individualistic portrayals of migrants as isolated, disembedded individuals (Schrover, 2018). Rather, the authors suggest that while the emphasis on migrant ethnic ties and networks, or ethnic enterprises, may appear to highlight the agency of migrants, it tends to reflect the perspective of the hosting society. By positing successful migrants as exemplary representatives of the meritocratic system of social mobility promised by the free-market economy and its liberal state.

also economic violence... because being completely and economically dependent on the husband erases further rights."

(Interview with social worker and head of the Women's Support Desk[67], Marina di Acate, June 27, 2023)

In addition to the patriarchal control and command structure, another factor influencing the professional integration of migrant women, especially Tunisian women, is the process of feminization of migratory flows, which has intensified, especially following the use of family reunification mechanisms. Although Tunisian migration to the Ragusa area began in the late 1970s and progressively intensified in the 1980s, the rate of feminization increased significantly from the 1990s onwards. This shift led to a notable transformation in the composition of the Tunisian workforce, which had previously been almost exclusively male (Palidda, 2020:124). This development produced divergent effects. On the one hand, it contributed to the consolidation of the Tunisian community in the area, earning a reputation among local employers for reliability and precision in agricultural work. On the other hand, it exacerbated gender inequalities, making it difficult for newly arrived Tunisian women to quickly enter the labour market, especially outside their immediate social networks. In most cases, Tunisian women find employment in greenhouses only if they are directly managed by their husbands or relatives. Otherwise, they work in packing and processing warehouses, where the workforce is almost entirely female. A representative case that highlights the complexity of these dynamics is that of A., a twenty-six-year-old Tunisian student who arrived in Italy with her family in 2004. A. describes her journey as an attempt to escape the social conventions typically imposed on her fellow countrywomen, prioritizing her desire to change her life. Her experience reflects an emancipatory aspiration and a rejection of the restrictive daily life associated with working in the fields, where her family had lived since their arrival in Italy. Unlike her sisters, A. was the only one to complete her studies, graduating from the language high school in Vittoria, thus marking a clear break with the traditional expectations

[67] The *Sostegno Donne* project is part of one of the actions outlined in the *Trasformare la Fascia Trasformata* project, coordinated by the *Tetti Colorati Onlus* Association, the *Proxima* Cooperative, the CGIL, and the *Altro Diritto Onlus* Association. This project includes a series of initiatives aimed at combating housing exploitation, isolation, housing marginalization, and educational poverty in the territory of Marina di Acate. Initially designed to provide support to migrant women in the field of socio-healthcare orientation, the *project* has quickly emerged as a central space for addressing the needs of all women who were not already reached by the other initiatives of the project. It has proven to be crucial in accompanying and supporting women in accessing medical care, healthcare services, and preventive measures.

placed on Tunisian women in the community. In contrast to her sisters, she was the only one to finish school and earn a diploma from the language high school in Vittoria.

> "I could finish school because when I got married only one year of school was missing before the diploma. Instead, my sisters went to school in Tunisia and that's it. All my sisters are married, there's only one that is still missing but she will get married this summer. But I said that I would have get married only if my husband would let me finish my studies. And after finishing school now I'd like to go to university and become a cultural mediator. I want to work. I want to earn my own moneys and have my own bank account. Only by doing this I can hope to go and live in Ragusa one day".
>
> (Interview to A., Tunisian women and student, Contrada Alcerito, Luglio 6, 2023)

In some cases, the dynamics of intermediation also enable workers to implement strategies that could allow themselves to improve their working positions and move towards more desirable ones. From the interview collected during the research, it often resulted that male workers take advantage of the sharp sexual division of labour between greenhouses and packing warehouses to position themselves as brokers. Specifically, these workers act as mediators and recruiters of female labour for warehouse managers, recommending women willing to work in the warehouses to secure employment in the warehouse for themselves, despite employers typically prefer to hire female workers, therefore positioning themselves as brokers. These workers act as brokers and recruiters of female labour for warehouse managers, recommending women willing to work in the warehouses in order to secure employment in the same warehouses where employers typically prefer to hire female workers.

> "In the warehouses, women are those who are mostly employed, but there usually the payment is lower. On the other side you don't stay the whole day in the heat with 40 degrees. But if you want to work in a warehouse and you are a man, you must bring at least 5 women to the manager. Otherwise, he won't hire you".
>
> (Interview to D., an Italian retired farmworker. Acate, May 30, 2023)

The role and the various forms through which intermediation processes influence the organization of migrant labor, as well as labor recruitment and work processes, are not merely

aimet at favouring the continuous availability and recruitment of labor. They also have a significant impact on the composition of the workforce and the organization of labor in the workplaces, but also beyond the workplace. One of the main areas of interaction for the concept of intermediation is represented by labor mobility, a phenomenon often characterized by unpredictable paths and trajectories, particularly in the case of migrant labor. The dynamics of migrant labour are frequently shaped by the development of social relationships, both with other migrant workers and with local workers (Alberti and Sacchetto, 2024). It is within the realm of social relations—formed both in work settings and beyond—that channel of intermediation, whether formalized or informal, take shape. These channels are stratified and diversified, shaped by the specific characteristics of the individuals who either experience or enact the mediation processes. For instance, in the case of refugees and asylum seekers, the first level of intermediation often occurs within reception centers, which play a crucial role in facilitating contact with agricultural businesses and local enterprises. To a lesser extent, traditional forms of labor brokerage, such as caporalato, are also observed, although they are less prevalent in the Ragusa area. Conversely, within communities more that have been established in the region for a long time, such as the Tunisian community, gender dynamics and patriarchal authority play a central role in shaping work processes, particularly for women, including wives and daughters. In the agricultural context of the Transformed Littoral Strip, these forms of intermediation are so pervasive and deeply integrated into the economic system that they can be considered as social infrastructures (Piro, 2022). However, alongside these established practices, spaces of resistance and transformation also emerge. As Alberti and Sacchetto (2024:185) highlight, mobility functions as an element of uncertainty capable of disrupting pre-established and mediated orders. It represents an "irreducible force shaped by subjective and material motives that make mobility power of migrants fundamentally unpredictable in its process and outcomes".

2.2. Labour and intermediation within the fruit and vegetable markets

In Chapter 5 we discussed the role of cooperatives in fruit and vegetable markets and how the mechanism of labour fragmentation plays a central role in the logistics sector, even within the agri-food supply chain. The progressive reorganization of production - towards increasingly flexible, just-in-time and low-cost labour - has thus facilitated the widespread use of outsourcing and subcontracting of certain services to third parties, which several authors have identified as

emblematic of the current era (Drahokoupil, 2015). Bubbico et al. (2023) further emphasize that the process of supply chain fragmentation is expanding and deepening on a massive scale, driven by the progressive trend towards digitalization and a series of crises (climatic, financial, pandemic-related and those linked to the consequences of the war in Ukraine). These crises have recently necessitated the adaptation of organizational forms and processes in various segments of the supply chain. From this perspective, there has been an increased reliance on outsourcing, self-employment (including pseudo-self-employment) and other forms of work arrangements that generally aim to transfer risks, responsibilities, costs and uncertainties to a variety of actors[68]. This process has affected both the public and state sectors - where there is a growing tendency to outsource social services, especially health, social education and school services (Mori, Neri, 2020) - and the private sector, where the fragmentation of supply chains and outsourcing phenomena often lead to the fragmentation of work (Bubbico et al., 2023). In both contexts, however, the objective is the same: to diversify regulatory standards - and consequently the quality of labour along the supply chain - to increase the availability of just-in-time labour and to meet the needs of production systems that require flexible and low-cost labour[69]. From this point of view, labour in the warehouses of fruit and vegetable markets - and thus in the logistics sector, which is one of the areas where outsourcing is most widespread - serves as a clear example of the spread of these mechanisms.

Given the central role of intermediation performed by markets within the organization of the fruit and vegetable supply chain, the integration of these additional levels of intermediation and subcontracting provides a particularly valuable lens through which to connect the restructuring of wholesale markets—discussed in previous chapters—with the study of changes in labor organization and work processes. As previously noted, the transformation of wholesale markets has occurred alongside the rise of large-scale retail chains and supermarket networks, which have progressively outsourced the management of goods logistics to independent platforms. This shift has also impacted the internal logistics organization within the markets, which were previously

[68] Various studies have highlighed how certain actors, such as hospitality (Iannuzzi, Sacchetto, 2020), the meat industry (Dorigatti, 2018; Piro, Sacchetto, 2021), the agri-food sector (LoCascio, Perrotta, 2022) and logistics (Benvegnù et al., 2018), are characterized by cooperatives specifically established to facilitate outsourcing processes within companies.

[69] The issue of supply chain fragmentation ha salso been at the center of labor union debates and actons. In response, workers' organizations have encountered significant challenges due to the vertical disintegration of enterprises and public administrations, as well as the fragmentation of labor. In some productive sectors, the conditions of worker underprotection have become so severe that countries such as Germany have introduced radical bans on outsourcing witjin specific supply chains such as the meat industry (Corazza, Razzolini, 2023)

less structured but have gradually adapted to align with market demands. In the case of CAAB, the internal organizational system has become a significant point of pride for market management, reflecting broader shifts in labor organization.

> "Previously, work was less mechanized, far less organizes or at least less efficiently organized. But today, we have a platform that, in terms of internal logistics, is truly state-of-the-art, with a strong reliance on technology. This also entails a reduced reliance on workers and an optimization of processes. It is a market that is undoubtedly far less populated than before, but at the same time, it has developed a logistics system that makes CAAB the flagship of metropolitan logistics, a system we have studied together with Toyota. Operators are located on the sides, buyers—both wholesalers and retailers—arrive at the market starting at two in the morning... it is essentially a small city, there's also a bar, a barber, and an ATM".
>
> (Interview with the President of CAAB, Marco Mercatili, January 20, 2023)

Figure 15. Operators within the CAAB warehouse

(Picture from the CAAB website)

As described in Chapter 5, the organization of work within markets reflects the spatial layout of these spaces. This logistical structure has to interact with an extremely complex supply chain, as it involves the handling of fresh and highly perishable products. Some of the incoming goods are destined for final distribution in Bologna or Padua, while other parts have to be shipped elsewhere. In addition, some goods are just in transit and need to be redirected to other urban logistics hubs[70]. The following extract of from the fieldnotes collected during the period of participant observation, provides a brief description and some initial impressions of the very first day visiting the wholesale market of Bologna. One of the main aspects that affected the research was the night-shift activities in the market, which meant that most of the interviews were conducted night-time. As will be described in the following chapter, nightshift is of the main components that

[70] In the case of CAAB, as discussed in previous chapters, a portion of the incoming goods is directed to the warehouses of Conor and supermarket chains located in the vicinity of the market.

makes migrant workers the most suitable workforce for within the markets. In this respect, the temporal and special dimension of work within wholesale markets play an important role in shaping the workers and the stratification of labour employed in these logistical contexts. As described in the following fieldnotes, spaces and areas within the markets are designed for different types of activities and different type of workers. Within the central area and the canopy, where the ranges of finished orders are processed, those in charge of transport work mostly moving the ranges from the warehouses to the canopy, driving the "muletti". They are in charge of the whole communication system between the inside and the outside of the market, since the assortment that arrive early in the morning are first moved into the markets' warehouses, and then back to canopy once they've been sold to the final client. As one of the quality control managers explains, this system has evolved over time, becoming much more innovative as the needs of the markets required improvements in terms of efficiency and traceability of the processed goods.

> "I arrived at the CAAB at dawn. I asked M., the quality control officer I met last week through Duccio Caccioni, if he was available to give me a tour of the market and allow time for an interview, and he set an appointment with me at 6 a.m. When I arrived at the CAAB, the situation was rather calm. I was expecting chaos, but apart from the forklifts constantly darting back and forth, most of the people were stationed along the sides of the large warehouse where the consortiums' storage units are located, among the stands and stacks of crates of fruits and vegetables. M. explained to me that, at 6 a.m., it's already late, as most of the work is done before 5 because the clients often must drive for several hours and reach their destinations in time for the store openings. *"In recent years, there's been a change in logistics, which used to be much less organized. Fruits and vegetables used to arrive in big bins; now we have a much more structured system, and we track everything that comes in and goes out to ensure traceability,"* M. said. As I followed M., I noticed that each warehouse had the name of the cooperative displayed above it, almost as if it were a shop. Inside each warehouse, besides the stacks of crates and pallets, there were small offices where, M. explained, the administrative staff of each consortium worked. The space was very large—a long warehouse where some men ride bicycles. The storage units of the various operational consortiums were arranged along the sides of the warehouse, while in the center was a wide aisle where forklifts rushed by, loading or unloading pallets full of fruits and vegetables. In the central part of the aisle, there were also other loaded pallets. M. explained that these were sold pallets waiting to be picked up and transported to the loading and

> unloading canopy. The canopy, accessible from the central part of the warehouse, is the heart of the logistics system. It's where arriving trucks unload goods and departing trucks are loaded with goods taken from the central aisle. As soon as we reached the canopy area, I started seeing something closer to my initial expectations. In the canopy zone, there was definitely more chaos: the number of forklifts in circulation increased, and most of the workers driving them and handling the loading and unloading operations were migrant workers, seemingly from North Africa, Pakistan, and Bangladesh. Shouts and orders flew back and forth across the large open space occupied by pallets filled with fruits and vegetables and trucks parked, waiting to be emptied or loaded. Along the large corridor that connects the internal part of the market to the external area, there were a tobacconist, a bar, a barber, and a bank. Since I arrived here, I haven't seen a single woman."
>
> (Field notes. Bologna, March 7, 2023)

The separation of spaces for the activities within the markets, also follows a logic of racialization as different spaces correspond to different tasks which – in turn - correspond to different categories of workers. The administrative staff working in the small offices inside the warehouses, for instance, are mostly Italians. On the other hand, those employed as porters and conveyors are mostly migrant workers hired through temporary contracts or outsourced through cooperatives of service. Indeed, already discussed in Chapter 5 (particularly in section 1.2.). the market structures host a variety of actors who contribute to the functioning of such complex systems as those of fruit and vegetable markets. One of the primary roles, directly dependent of the fruit and vegetable markets, is that of market inspectors – employees directly under the authority of the markets – who are responsible for ensuring the monitoring and proper functioning of internal market activities, as well as overseeing the flow of goods entering and leaving the market. The inspectors thus serve as intermediaries between the markets and the wholesalers operating within the market structures. The testimony of quality control inspector at the CAAB further reveals that a significant portion of the workforce within the market consists of migrants, who are predominantly engaged in tasks such as loading and unloading goods or other manual handling operations.

> "Inside the market, almost everyone is a foreigner. There are also some Italians, but the majority are foreigners. These are people who face linguistic

challenges and religious difficulties[71] – most of them are Muslims. However, they are all people who need to work and who do work. On the other hand, there are very few Italians working as porters. Under the canopies, however, there are more Italians. The canopy area deals with loading and unloading goods, and most of those workers are Italian because they still have the old companies that were there when the market first opened".

(Quality control inspector interview, CAAB, Bologna. March, 14, 2023)

Within the market, workers with distinct contractual arrangements coexist. On one hand, the direct employees of the market – responsible for ensuring the proper functioning of market activities, are almost exclusively Italian nationals. On the other hand, wholesalers operating in the warehouses and managing the commercialization of products are predominantly Italian. Finally, tasks related to logistics and manual handling are generally entrusted to porters employed through subcontracting arrangements, the majority of whom are migrant workers. Although in both Bologna and Padua the activities of logistics and manual handling are largely outsourced to third-party companies, significant differences can be observed in the composition of the workforce. The cooperatives managing logistics activities under the canopies tend to employ, often for relatively long periods, a substantial proportion of Italian workers, facilitated by the continuous operations of companies in this area. In contrast, manual handling activities in the warehouses primarily rely on migrant workers and are characterized by a notably higher turnover rate compared to logistics work.

"You see a lot of different faces around here; many have been here for years, and others have even retired after working here. Nowadays, there's a lot of staff turnover…I'm not talking about the canopy because there's more stability there, but when it comes to wholesalers, it often happens that people come, stay for 6 or 7 months, and then quit. So, in that area, there's some turnover. Not everyone, of course, but a good 60%, maybe even 70%. The rest are those who've been here longer. So, let's say there's more turnover in the warehouses than under the canopy. Its' not like there's a huge difference in the type of work or tasks between the canopy and the warehouses, but that's just the way things have

[71] While not the primary focus of this analysis, the testimonies collected during the fieldwork period revealed numerous instances of racial prejudice. These instances manifested in various forms, both in the relationship between workers and employers and in the interactions between direct and subcontracted workers. They have operated in a pervasive manner, contributing to the further fragmentation of the workforce.

> turned out. Fortunately, under the canopy we've got a more stable team, and over the past year and a half, it's pretty much been the same group of people working here".

(Interview with the canopy manager hired by the externalized cooperative at CAAB. Bologna, March 21, 2023)

One key factor distinguishing work in warehouses from that in logistics areas, is the level of intermediation involved. In the case of logistics activities, these outsourced by the market management to third-party companies, which assign the loading and unloading operations to their own employees. Consequently, these workers operate within the market areas while being formally employed by external companies. Conversely, for porterage activities within the warehouse, an additional layer of intermediation is introduced through the commissioning companies. These companies operate within the market spaces allocated to wholesalers, who, as explained by the CAAB quality control officer, typically rely on cooperatives to provide porterage and picking services, with only a few exceptions.

Figure 16. External logistic conopy of CAAB

(Picture from the CAAB website)

"They're hired as employees of the logistics companies, so they're directly employed by them. Within the market warehouses, the porters are almost never direct employees of the warehouse itself. Instead, they're often employees of the logistics companies that loan them out. For example, if warehouse says "I need five workers to handle logistics and move goods", the logistics company sends them five. If one of them gets sick, they send another. If one leaves, they replace them. If they need an extra worker, they provide one. These logistics companies have a pool of workers they manage based on things like vacations, schedules, resignations and new hires. This way, the warehouse can keep its number of direct employees low because they're not interested in hiring too many people. Or, lets' say, there's a contractual adjustment. For instance, they initially asked for five porters, but they realize they only need four? They just remove one from the pool. If that fifth worker were a direct employee of the warehouse, it would be a hassle, because you can't just fire someone on the spot. But this system allows them to say, "The fifth porter is too expensive, we don't need them anymore, we'll stick with four", and that's it".

(Interview with M., quality control officer. Bologna, March 7, 2024)

This represents an extremely stratified and compartmentalized system, in which the markets – owned in part by public entities such as the municipalities of Bologna and Padua or the *Camera di Commercio* – select through public procurement, the wholesalers and operators to whom they grant space within the warehouses. The operators, in turn, subcontract porterage work to limited liability companies (SRLs) or cooperatives, which, in the cases analyzed, are often based within the market premises. As Piro (2022) suggests, such cooperatives are frequently established specifically to facilitate outsourcing processes and thereby reduce labor costs, which, according to union sources, can be lowered by as much as 40-50% (Carchedi and Franciosi, 2016). Therefore, the subcontracted employees work within the market and warehouse facilities, sharing continuous spaces with personnel directly employed by the commissioning company. However, as Coe (2017) notes, these employees are subject to dual oversight: on the one hand by the commissioning company and, on the other, by the subcontracting firm.

> "The cooperative that manages the logistics in the shed used to have contracts inside the warehouses as well, but then they lost them, and now they only manage the loading and unloading work in the canopy. They lost the trust of the operators having a spot in the warehouses. Before, they had a different name, there was another cooperative that went bankrupt, and the workers were absorbed by the cooperatives that exists now, but it has a lot of problems. […] The problem is that in some cases the warehouses have interests, and they make deals with the cooperatives, and in several cases, the warehouses have pressured the cooperatives to fire workers who were members of the union. Instead of being happy that someone wants to work safely and legally in their warehouse, they don't care…because even if there's an inspection, the companies can just say they don't know anything, that the worker is outsourced, and they don't care. The warehouses don't care about these things".

(Interview with a Tunisian worker employed by a porterage cooperative in the CAAB warehouses. Bologna. March 28, 2023)

In some cases, forms of solidarity and alliances between client warehouses and subcontracting companies have strengthened the level of control over workers, particularly in the case of unionized workers. The fragmentation and multiplicity of control levels affecting workers also means that, in most cases, the transition from one cooperative to another does not ensure the proper

closure of contracts, the recognition of the Severance Pay (TFR), or the social security contributions made during the employment period.

> "I had some TFR left over as a social security contribution, and we hadn't even received the TFR from the previous cooperative. Now I've applied again to get it, but if you ask them (the managers of the cooperative) they say they've already sent it to the INPS. Then, if you go ask to INPS, they tell you they haven't received anything. For me, for example, there are some social security (quote sociali) contributions left from my pay, just a small amount, about 600 euros. It's not so much, but it's still money. There are colleagues who maybe left 3000 or 4000 euros and haven't seen anything. This has happened in several cooperatives that have worked at CAAB over time. But they (the cooperative) do this every year, and each time they bring in a new manager. They just change the manager of the cooperative, but we have no information about what is happening. They don't even let you have a meeting or an assembly to explain you how things work or what has happened. They just bring you a new contract, and either you sign it, or you leave. We even tried to ask them to tell us what's going on at CAAB because we want to know how things are going. But they don't tell you anything. There are other cooperatives that stopped paying contributions. Others haven't finished paying workers from the previous cooperative, and the new cooperative that came after finished paying them […]. And sometimes they fire you just for asking. One guy was once asking to the operator some information about the contract, and he was fired by the manager of the cooperative. But you cannot forbid me to ask questions and information about my contract. I need to have more information, I need to know what happens if you fire me, if I will have right to the unemployment subsidy or not, because if I have a family I must know this information. But when he went to ask for this to the operator he was then fired".
>
> (Interview with an Algerian worker employed by a porterage cooperative at the CAAB warehouses. Bologna. March 28, 2023)

Building on the differentiation between workers employed through cooperatives within the warehouses and those working in the logistics canopy, it is important to recognize how the continuity or lack thereof subcontracting companies affects workers' ability to secure a range of rights and social security measures (e.g., severance pay, reimbursement of social security contributions, sick leave, parental leave), which can be easily circumvented by companies. As Piro (2022) suggests, these are often cooperatives described as "spurious" or "fictitious", deliberately

crated to facilitate outsourcing and subcontracting processes, primarily aimed at cost reduction through the lack of affiliation with national organizations, payment of wages below collective agreements, a high percentage of foreign workers, and the relatively short lifespan of the cooperative (Iannuzzi and Sacchetto, 2022). It becomes evident, then, that within cooperatives adopting such mechanisms to minimize labor costs in a nearly instrumental manner, without truly respecting the mutualistic goals inherent in cooperative organizations (Assemblea Legislativa Emilia-Romagna, 2019), the choice of workforce often falls on migrant workers, as highlighted by the interviewed unionist.

> "Logistics and portering have always been fertile ground for those looking to exploit labour, especially migrant labour. These are simple jobs that don't require any particular specialization – at least when it comes to moving goods. It's mostly about shifting merchandize, sometimes using electric carts or forklifts. The reality is that these tasks can be done by people who don't speak or barely speak Italian. This opens the door to hiring workers who struggle to enter other sectors of the job market, often due to issues with residence permits, precarious documents, or being in the process of seeking asylum. These workers are often willing to accept any kind of contract because it allows them to survive. From this perspective, logistics has always been highly accommodating to such practice. The system of contracts and subcontracting further pushes down responsibilities and labor costs. Those investing in this sector walk away with profits, and since it isn't a capital-intensive sector, the only way to generate those profits is by squeezing the workforce as much as possible".
>
> (Interview with grassroots trade unionist who followed some workers' struggles in the warehouse of Padua. Padua, December 13, 2023)

However, it is important to highlight that, in response to the cost-cutting strategies employed by companies, workers are far from passive. On the contrary, research has repeatedly demonstrated that contract workers often develop innovative strategies for mobility and organization, both through spontaneous initiatives and with the support and guidance of trade union organizations.

3. Working in organic agri-food supply chain

The previous chapter examined the transformation of organic agriculture and its underlying values, highlighting the shift in producers' approaches to organic and sustainable practices. This

shift has been primarily driven by increasing consumer demand for sustainable products and the emergence of the corporate environmental food regime (Friedmann, 2005). These developments have heightened the relevance of policy instruments aimed at regulating and supporting organic agriculture, leading to a growing number of organic producers. As explained in Chapter 2, the conventionalization of organic agriculture, as described by Buck et al. (1997) has been characterized by the progressive integration of organic practices into larger agri-food systems (Getz et al., 2008). This phenomenon involves multiple actors engaging at various levels, mobilizing green consumers and contributing to the expansion of green capitalism (Levidow, 2015). However, as previously indicated, there exists a significant gap in empirical research that examines the intersection between the rising focus on environmental sustainability and the diverse distribution channels associated with organic production. To this extent, investigating the relationship between organic agriculture and working conditions presents notable challenges, particularly against the backdrop of restructuring within global agri-food supply chains.

Nonetheless, several factors suggest that organic and sustainable agriculture could enhance working conditions within the agri-food sector. For instance, reducing workers' exposure to harmful chemicals and fertilizers is a significant advantage, as evidenced by Medland's (2016) empirical research, which indicates a preference among workers for organic farms based on health and safety considerations. Additionally, studies by Hilal et al. (2021) have linked organic farming to increased labor demands and the creation of employment opportunities. While the concept of the conventionalization of organic agriculture highlights the political and strategic influence of agribusiness actors throughout the supply chain, this process has frequently sidelined crucial principles of organic agriculture, particularly those related to social sustainability and justice, which have been largely excluded from regulatory and political frameworks. In this regard, the development and expansion of organic agriculture in the Transformed Littoral Strip serve as a compelling case study. This region reflects two intersecting dynamics that have unfolded over recent decades: the growing integration of the global agri-food market, particularly in enclaves connected to migrant labor flows (Ramìrez-Meògarejo et al., 2015), and the "quality turn" in agricultural production systems (Goodman, 2003; Bonanno et al., 2012), which signifies an increased interest among agri-food retailers in product quality to enhance competitiveness and facilitate access to traditional markets. This quality-oriented transformation has driven many companies in the Ragusa area to pursue organic certification since the early 1990s (Cortese, 2020).

During the fieldwork conducted in the Transformed Littoral Strip, one of the primary objectives was to assess whether organic farming offered advantages compared to traditional and conventional farming. However, accessing farmworkers in organic companies proved challenging, particularly for migrant workers, especially given the effort to avoid employer-mediated interviews that could bias responses. Consequently, interviews were primarily conducted during participant observation at the Caritas presidium in Marina di Acate, which predominantly attracted precarious and undocumented migrant workers, many of whom lacked awareness of the characteristics of their employing companies.

At the initial stages of the research, numerous interviewed workers—often employed without formal contracts—were unaware of whether their employers practiced organic or conventional farming. Thus, obtaining direct information about organic practices from these migrant workers was difficult. Moreover, the prevailing perception among those interviewed suggested minimal differences between organic and conventional farming regarding working conditions. A legal expert from the Caritas presidium in Marina di Acate expressed skepticism, stating:

> "Here there are such virtuous farms that offer you organic products (…), but when I hear them talking about excellence in Vittoria, to me it sounds so much like a tale that we tell ourselves. Because to define excellence, they (the farmers) should guarantee not only the quality of production itself. But they should also guarantee workers' rights, they should care about correct waste disposal, care about not using any kind of banned product just when they know theres' going to be some control"

(Interview to the lawyer from the Caritas presidium of Marina di Acate, June 23, 2023)

As previously discussed, the working conditions in the region appear to be governed less by the agricultural approaches adopted by individual farms, and more by unwritten rules that are shaped by the regional priorities and unwritten rules. Alongside the widely acknowledged working conditions in the local agricultural sector, another factor contributing to the sector's negative perception may be the concept of "agricultural exceptionalism" (Skogstad, 2002). According to agricultural exceptionalism, farmwork differs from other economic sectors due to its vulnerability to uncontrollable variables such as weather and market fluctuations, which contribute to income instability. Additionally, the low elasticity of demand for agricultural products often results in persistently low farm incomes, even in growing economies (Daugbjerg & Swinbank, 2009).

Moreover, investigating the role of agriculture and of organic farming in Southern Italy is particularly interesting given the region's historical characterization as "underdeveloped" compared to the rest of Italy and Europe. This perception is further compounded by an agricultural sector dominated by a migrant workforce, which is commonly regarded as enduring exceptionally poor working and living conditions. Such views are pervasive among local residents, who frequently express skepticism regarding the potential for meaningful change in the region. However, Dines and Rigo (2015) advocate for a postcolonial perspective that challenges the prevailing geographical narrative about the Southern Italian agricultural sector. This approach repositions the Transformed Littoral Strip as central to understanding broader transformations in European migration management rather than viewing it as an exceptional case. In this context, the intersection of agricultural and geographic exceptionalism has, on one hand, normalized exploitation and poor working conditions within the local agricultural sector. On the other hand, it has contributed to the homogenization of agriculture, leaving little space for positive exceptions within the local discourse.

Another important aspect to consider when examining organic practices is the type of farms that typically adopt these methods. The diversification of approaches often leads rto a significant increase in costs—stemming from the increased heterogeneity of practices, the necessity for differentiated processing methods, higher input costs, and an overall rise in workload—costs that only larger firms are generally able to sustain without incurring efficiency losses. This observation was echoed by one of the trade unionists interviewed during the fieldwork:

> "Usually, the companies that do organic farming are larger and trade with foreign countries. So generally, there is less exploitation, because the demands that come from the Northern European markets require a certain standard of production. So, those who trade their products abroad, within Northern Europe for instance, who market everything organic, do not have the problem of exploitation or have it, let's say to a very limited extent".

(Interview to the project coordinator of the Caritas Praesidium. Marina di Acate, June 8, 2023)

Therefore, as noted in previous sections, the mandate for controlling the regularity of production practices appears increasingly dictated by market rules and private regulations. These frameworks establish new conditions for defining standards and guidelines, which in turn influence working

conditions for farmworkers (Bartely and Coe, 2022). Furthermore, the innovative trajectories of the largest and most regionally embedded companies – often leaders in the fruit and vegetable sector, particularly tomato production since the 1970s – are frequently associated with international competition. This primarily concerns companies that have the capacity to invest in new developmental pathways that appeal to global markets, such as organic farming. Such investments can also empower these companies to counterbalance the monopolistic power of suppliers and buyers at the upstream end of the production chain. For instance, one of the historic tomato producers in the Vittoria area has recently (within the last ten years) integrated organic farming into its production processes, although the majority of its output aligns with a zero-residue approach.

> "We have always worked mostly with Italian clients and with the Italian market and we started to produce organic only in the last 5,6 years when we actually started to increase our trade also with Switzerland and Austria where they only purchase organic and controlled products. As soon as they demand for organic products was increasing, we decided to integrate also organic production as it was profitable for us to be able to offer both conventional and organic production. I think that in general the amount of organic production that a producer does is mostly dependent on the demand from its clients. For instance, we only integrated organic recently because as we mostly sell to Italian clients, they started to increase their demand for organic products only recently and the market is still quite fluctuating. So, most of the organic that we produce still goes to foreign clients, but it depends on the type of client as we must adapt our production to the parameters they set. Because we must primarily align to the Sicilian disciplinary, but often clients provide their specific checklist concerning the active ingredient that they allow within pesticides or fertilizers, and therefore there is also an increased diversification of activities and practices that we must ensure. […] Let's say that we know that each group of client has its own preferences and therefore we must adapt our production to that, and this also implies a differentiated amount of work depending on their requests. Therefore, considering the workforce, there is a slight difference especially concerning the frequency of the treatments needed within the greenhouses as we use products that require more use than a product that was used twenty years ago, which is no longer allowed today. The products we use are therefore more labor-intensive than a product that might have been used 20 years ago, which is no longer allowed today. For instance, now, if we have a problem with a particular

pathogen, we use products that may require me to do the treatment every 15 days. […] I have to admit that in our company, as we were already doing zero-residue farming, the difference with organics, also in terms of costs, was not that high. Obviously if you compare the costs with those who produce without controls, and just bring their production to the market of Vittoria, there's a significant difference…but for us not really because we were already using a lot of products that were allowed from the organic disciplinary and we just have to change some aspects of our production process which didn't have a significant impact on the overall costs. The main difference regards the frequency of the treatments, because there are problems that might rise in the fields, for instance, that cannot be solved with a single treatment and require a greater commitment. The difference is there, not really in the number of persons you hire, but rather in the amount of work you have to do. Because if in conventional farming you can just do a treatment once in a month, in organic agriculture you must intervene several times".

(Interview to the manager of one of the biggest organic and conventional companies in Vittoria. Vittoria, October 23, 2023)

Consequently, the intensification of work and the increased workload significantly affect working conditions in organic farming. These practices become more time-consuming and are oriented toward a preventive approach, which has been a defining characteristic of organic farming, necessitating greater effort, particularly in preventive measures. In the case of the large organic and biodynamic farm in Marina di Ragusa, where the period of participant observation was conducted, the farm manager notes that, unlike conventional agriculture—where interventions typically occur after damage has already taken place, necessitating actions to eradicate pests—organic farming emphasizes proactive measures. This approach requires longer periods of labor and a heavier workload, resulting in an estimated increase in labor needs of approximately 13%, according to Hilal et al. (2012).

"Organic agriculture is completely different than conventional agriculture where they don't need to put all these things into practices because you still use chemical treatments based on molecules that don't give you any problem with insects. They destroy all the biodiversity, though. [With organic agriculture] there is always something extra at the labor level, though. Here, on average, we treat with vegetable oils, orange extracts, and essential oils every five

days…while with conventional they use chemical treatment every twenty days and then you're good".

(Interview with organic and biodynamic producer. Marina di Ragusa, October 19, 2023)

Figure 17. Inside area of a greenhouse

Picture by Giulia Magnano

From the workers' perspective, those interviewed expressed that there is little distinction between the practices of conventional and organic farmers, particularly regarding the daily activities performed. For instance, one worker employed in the greenhouses of the aforementioned historic company in Vittoria stated that he perceived minimal differences between organic and

conventional farming. He emphasized that the primary distinction lies in the types of products used.

> "Nothing changes between organic and conventional agriculture; I can tell you that. Whether organic or conventional, the work is the same in the end, the work to be done is the same and there is not too much difference. Even the farm where I work, even though they are very strict about certain things - for example you can't wear a hat on your head because otherwise you risk breaking the plants - in the end it's not that there is a practical difference (between organic and conventional farming). It may happen that you go to work with someone who is not organic, but he treats you well, that is, it's not so much the difference between organic and conventional, but between the companies, because then the work is the same, the plant is the same, at most the type of treatment changes".

(Interview to Italian farmworker employed in one of the local largest companies. Vittoria, June 30, 2023)

As suggested by the interviewed worker, the distinction between organic and conventional farming does not appear to be the primary factor influencing working conditions across different farms. Instead, these conditions seem to be more significantly shaped by individual management practices determined by the producer, with the type of crop cultivated being a secondary consideration. From this perspective, as highlighted by several authors (Guthman, 2004; Hall and Mogyorody, 2001), the boundary between conventional and organic farming has become increasingly blurred, especially with the conventionalization of organic agriculture, where organic practices have progressively adopted many characteristics of conventional systems.

However, one distinguishing factor among some of the farms studied pertains to their relational dynamics, particularly significant for producers committed to the foundational principles of organic farming. For instance, Anna Cortese (2020:69) notes that in the Ragusa region, it is common for innovative companies to foster cooperation and enhance worker productivity by offering stable employment and favorable working conditions. Among the farmers and workers interviewed during the fieldwork, the longest employment relationships—some extending up to 20 years—were predominantly found in organic enterprises. Nevertheless, despite these long-term associations, employment contracts often remain seasonal. This is particularly evident among the women employed in the processing warehouse where participant observation was conducted. Here,

most of the workers have been employed for over a decade without transitioning to permanent contracts. To this extent, this continuity is also associated with the central role assumed in the local context by agricultural unemployment, which can only be perceived in the presence of a seasonal-type contract. The perception of the transition to organic farming within companies largely depends on their ability to offset increased costs, diversify production-related activities, and, crucially, manage the heightened labor demands. Additionally, it is essential to examine the role of technology, which is integrated into farming practices in various ways, contingent upon the size and resources of each enterprise. To illustrate this point, the following interviews present two contrasting examples that highlight how technological innovations—particularly those aimed at enhancing environmental sustainability—are adopted by companies of differing scales and capacities.

> "In the other company where I worked […], they have greenhouses that are, let's say, more emancipated, in the sense that they do everything above the ground. […] They have electric carts that make you go up even four meters, to work and clean the plants. They have electric systems that make everything automatically. They are companies that are much, much more developed. I worked there for eight years, then I got pregnant, and I quit. In that company, even though it was still farmworking, it was very different from the classic greenhouses. Compared to the classic ones – the wooden ones, or the iron ones – these were much, much more developed and had all other different ways of working, and the work was not so hard".

(Interview with A., Romanian worker employed in an organic farm. Vittoria, June 30, 2023)

In this context, A., emphasized that the adoption of advanced technologies – such as electrical ventilation system for greenhouses and adjustable trolleys designed to accommodate varying work heights – can significantly reduce the physical strain associated with agricultural labor. These innovations not only enhance operational efficiency, but also signal the capacity of a company that, while adhering to organic standards, has established itself as a regional leader capable of investing in cutting-edge technologies that may also improve working conditions for employees. However, the widespread implementation of such technologies among local agricultural enterprises seems improbable, particularly given the prevalence of small-scale farms in the area, over half of which cultivate less than 20 hectares. Thus, while A.'s experience illustrates the

tangible benefits of technological integration, the outcomes may differ markedly in smaller-scale operations.

To exemplify this disparity, consider an interview with a small-scale traditional farmer and his employees. Despite the farmer's strong commitment to environmentally sustainable and eco-friendly practices, he cannot transition to organic farming due to the proximity of his greenhouses to those of a neighboring farm that employs conventional methods. This spatial limitation prevents the necessary isolation from prohibited substances, such as pesticides and chemicals, that are incompatible with organic certifications and high-quality standards. Nevertheless, this does not deter the producer from adopting measures and techniques aimed at minimizing the environmental impact of his production, starting with the use of compostable materials.

> 'This here is a cornstarch string. Look, if you look closely, it's made of three intertwined strings that are compostable. And this one here is a hook for holding tomato plants that is also compostable. It looks like plastic, but it is still made of polylactic acid. While the twine is made of corn starch. Both are compostable, so they degrade slowly, but I can do a cultural cycle of 3 to 10 months with them. So, it has to be material that can last. In my case then I also go to a company in Caltanissetta that also takes my agricultural waste, which is then entirely compostable, and mixes it with biogas. So, it produces biogas at least with the liquid part of the agricultural waste I produce. But they need a guarantee that everything in the "*fratta*" is compostable, and the only way they can do that is if I only use compostable tools and things. So, I use this technique, but it still needs to be perfectionated because it still has some criticalities. […] Moreover, even though I am not organic, I use these practices which are not even expected by the organic disciplinaries. So, to a certain extent I am even more sustainable than organic producers. Because organic producers often use plastic clips and when the plant cycle is completed, they burn the waste together with the plastic strings. So, paradoxically, even though I am not an organic producer, I am more precise and sustainable than many others. This is the truth, but it is also much more expensive for me".
>
> (Interview to conventional agricultural producer. Costa Esperia, June 28, 2023)

Figure 18. Uncovered greenhouse with eggplant plants.

(Picture by Giulia Magnano)

This situation illustrates some of the strategies employed particularly by small producers, to differentiate themselves from their competitors and establish a foothold in a highly competitive market niche. However, while these practices may be perceived as "more sustainable than many others," their integration into farming operations often entails negative externalities, especially regarding their impact on workers' activities. In this instance, the technology adopted by the farmer reflects a considerably limited scope of innovation compared to the preceding farm. For example, the use of strings and hooks, commonly employed in tomato-growing greenhouses, serves to support the plants and mitigate damage caused by the weight of the vines. The techniques employed by this farmer primarily focus on enhancing the environmental sustainability of the production process rather than on increasing productivity. Additionally, these technological

practices align with the financial constraints typical of smaller enterprises, which often encompass just a few hectares of greenhouse cultivation and a workforce of four employees. However, an interview with this second producer, complemented by discussions with their employees[72], revealed ambivalent attitudes toward the adoption of some of these innovative practices. The dialogue between E., a long-term employee, and A., the owner, provides valuable insights into these mixed perspectives, as detailed below.

> **"E:** Today we were working in the 2000sq.m greenhouse, and we were three. But we had a problem with the string…
>
> **A:** (He refers directly to me to explain me how it works) The compostable lace, the one I showed you earlier…it's a bit difficult to untie…
>
> **E:** If we were with the classic lace, we could have done the same amount of work in 4 or 5 hours. Because with this string it took us more time and we even had to cut the lace with the knife, because the string goes all around the plant knotting itself.
>
> **A:** (Again he refers to me) Because with the plastic string we used before it was easier and by pulling the lace, the knot is untied right away. Instead with this new lace, you pull the string but then you need to use the knife and therefore it takes more time.
>
> **E:** And since none of the other guy is telling him – he points A., the employer – earlier I brought him in the greenhouse to show him how longer it takes to work with that type of lace that I don't like.
>
> **A:** (He explains to me) Because it takes more to lose the knot…for me as an entrepreneur this is a cost both because this type of lace is more expensive compared to the traditional one made out of plastic, but also because it's a more tedious job and workers need more time to carry the same task.
>
> **E:** We take more time because instead of working 8 hours on this task, it used to take us 5 hours with the other type of lace we were using before. Because with this

[72] In this case, part of the interview and of the informal discussions with workers took place in the presence of the employer, as the employees, upon completing their shifts, returned to the warehouse where I was conducting the interview with the entrepreneur. While the presence of the employer might typically be regarded as a factor compromising the interviews' reliability, it did not appear to inhibit the worker from voicing his skepticism regarding the agricultural practices aimed at enhancing sustainability. These practices, despite their intended environmental benefits, seemed to lack support among the workforce, who are primarily responsible for the labor-intensive tasks carried out in the greenhouses.

lace you have to take it off, to clean it, to cut the knot…with the plastic lace it's easier".

(Interview with A., agricultural entrepreneur and E., Italian farm laborer, Victoria, June 28, 2023)

During his conversation with the employer, E. expresses skepticism regarding the sustainable farming practices implemented by the company, particularly emphasizing the extended working hours necessitated by the introduction of new equipment. This perspective aligns with findings in the literature (Hilal et al., 2021; Farreras and Salvador, 2022), which highlight the intensification of tasks and work hours as critical consequences of the transition to sustainable or organic farming practices. The increased workload associated with organic and sustainable approaches is acknowledged by both workers and employers, with its impact varying based on the size and resources of the company. This variation primarily arises from the preventive measures emphasized in organic agriculture, which necessitate additional practices to protect crops from aphids and insect infestations. While organic farming reduces exposure to harmful substances compared to conventional methods, interviews conducted during the fieldwork revealed minimal differences in workers' preferences regarding their overall working conditions. Previous research concerning the interplay between social and environmental sustainability within organic farming similarly emphasizes this lack of distinction between conventional and organic farming regarding working conditions (Medland, 2017). Nonetheless, organic farming has been associated with fostering more positive and enduring relationships among social actors (farmers and workers), slight improvements in health outcomes, and enhanced social dynamics. However, these benefits do not translate into significant differences in contractual terms, wages, or job responsibilities for workers. A primary reason for this uniformity is that organic farmers recruit labor from the same labor market as non-organic agriculture, particularly within production enclaves where the boundaries between organic and non-organic practices often blur.

In the Ragusa area, for instance, agricultural labor dynamics are governed by longstanding rules and logics shaped by a mobile and racialized labor market. Within this context, the same activists and institutional actors oversee both organic and non-organic sectors, with the exception of organic certification bodies, which do not directly engage in labor market regulation. However, these bodies influence agricultural labor processes by redefining the practices required for certification.

Such redefinitions often lead to increased workloads and diversified workplace activities, further altering the dynamics of labor in agriculture.

3.1. Standardization and forms of control within packaging warehouses

Moving beyond a conception of intermediation limited to the workforce recruitment, it becomes clear that processes of standardization and certification are crucial in shaping work modalities and schedules. As discussed in Chapter 4 and 5, the involvement of both private and public actors is central to defining increasingly standardized practices and production processes. This evolution has strengthened intermediation processes, particularly regarding the accreditation and recognition of certifications and quality standards (Loconto, 2017; de Castro Pericacho et al., 2021). Despite the importance of intermediation dynamics and forms in the relationships between different supply chain segments and the actors involved at each level, few studies have explored how these forms influence labor processes and the organization of living labor.

This section, aims at showing how the requirements of organic clients and the guidelines provided by certifications shape the labour processes within the packaging warehouses, making the rythms of work tasks extremely pressing and therefore resulting in long and unpredictable shifts significantly affecting workers' bodies. Based on the period of participant observation conducted within the packaging warehouses of the EcoNaturaGroup company – one of the leading organic cooperatives in the region and the main supplier for NaturaSì for fruit and vegetable products— this section shows how workers are employed within an organic business. Particular attention is devoted to examining how the forms of intermediation explored in previous sections are articulated and translated into labor processes, based on an analysis of workplaces as privileged sites of observation[73].

[73] Adopting a more literal interpretation of the concept of intermediation – which might be better defined as a mediation – the entry into the warehouses dedicated to processing and packaging, where part of the participant observation period took place, introduces an additional level of mediation. This level is closely tied to the decision to undertake the observation period by openly communicating my intentions to the company that employed me. Throughout the observation and work phases within the warehouses, I was accompanied by T., an Italian worker who, as I discovered after a few days of work, was the aunt and sister of two of the company's founding members. Therefore, her role, has significantly influenced the course of the observation period. On the one hand, other workers displayed a certain deference towards T., who implicitly assumed an informal role of control and regulation in the work processes. This role was often manifested through comments and attitudes directed at her colleagues, even though they performed the same tasks. On the other hand – as emerges from the field notes – her account stands in stark contrast to the narratives shared by the other workers employed in the warehouse.

“Today I went to the warehouse again. It was exhausting. Yesterday, we only worked for two and a half hours, from 2:30 PM to 5:00 PM, but today we worked six consecutive hours with just a 15-minute break. Alessandra, who manages the shifts and personnel, sent me a message too late in the morning, and as it takes me 40 minutes by car to get from Vittoria to Marina di Ragusa, where the company is based, I arrived late. When I arrived, all the workers were already at their stations. I rushed to clock in, put down my backpack, grabbed my things, and started working, positioning myself in front of Tamara so she could oversee how I worked. We started with the eggplants. But there were three different tasks to do for three different clients and market segments—and therefore different product quality levels. The most beautiful eggplants, which had to be nearly perfect, were placed in 5.3-kilogram crates; the smaller ones or slightly damaged ones went into smaller packages that were grouped into sets of five in the "big pan"; and finally, the larger eggplants, even with some imperfections, went into yet another type of crate. But first, all the eggplants had to be cleaned, and their stems had to be trimmed with scissors. Three different preparations, three different boxes, three different containers to handle in a rather tight space. I tried to be fast and precise, but at some point, I think I got confused and made some mistakes. The colleague at the end of the conveyor Strip, who checks the crates before they are stacked onto the pallets, yelled, "Who did this?" pointing to crates where the weight was incorrect or where there were eggplants that were too big or too small. If it was my fault—which, indeed, it was a couple of times—I admitted it without hesitation, even though I struggled to understand what they were saying, partly because of the dialect, partly because of the background noise and confusion. “*They might try to give you a hard time, Giulietta, but watch how I handle them,”* Tamara said to reassure me. She seems to like me, probably because I’m the youngest. However, I’ve started to notice some tension between Tamara and some other colleagues, as if there were “factions”. *“I’d rather prefer you to get one preparation right so that next time you can be faster,”* Tamara told me. And indeed, after a while, I started to get the hang of it and became more precise. Take the cleaned eggplants from Tamara, grab a crate, open it, place the paper liner inside, arrange the eggplants to reach the required weight, stick the "organic" labels on, and place them on the conveyor Strip. And then repeat. While Tamara cleaned and sorted the eggplants, already arranging them based on the type of preparation, Maria, who was on the other side of the station from me, and I placed the eggplants into the crates. Maria is a woman I would have described as “elderly” before knowing her actual age—she told me during our lunch break that she’s 62. She’s small and thin, with brown hair and

a face deeply marked by wrinkles. After two hours of work, Mohammed, the Moroccan guy responsible for stocking the packed crates onto the pallets, told us we could take a 15-minute break. Therefore, I realized we'd probably have to work at least double the time we had already done, but no one knew when the shift would end. "*Is it never clear when the shift ends?"* I asked Tamara, who is helping me out during these first days, giving me instructions about the tasks. *"No, it's never clear, but I have to leave by 7:30 PM,"* she replied. Today I discovered that Maria is married to Maurizio, another warehouse worker who moves the crates onto the conveyor Strip for processing. Maurizio's job is quite demanding—he's almost always bent over, lifting and moving heavy loads. Maria says she worries about him.

- *"It's hard, isn't it? You see how hard it is*," Maria said to me as we smoked a cigarette outside.
- "*Yes, it's tough… and standing for so long is very tiring*," I replied.
- *"I'm exhausted; my whole back hurts."*
- *"Have you been working here for a long time?"*
- *"I stopped in 2018 and 2019, but I came back because we want to buy a house."*
- *"You and Maurizio, right? He's your husband?"*
- *"Yes. You see how thin he is? He has two metal rods in his back, but we still have to work to buy a house."*
- *"Before working here, did you work in another warehouse?"*
- *"No, I used to work in the fields. That was much better."*
- *"Better in the fields than in the warehouse?"*
- "*I worked in a nursery, watering and arranging plants—it was much lighter work, and I liked it more. But unfortunately, that farm closed, so I came here."*

After this brief exchange, I went back inside, as the break was almost over, and I needed to refill my water bottle. As I entered the warehouse, I saw Abiba, another worker, sitting on a pile of crates looking at her phone. I approached her and introduced myself. Like Maria, Abiba's face was weary and deeply lined. The conversation I had with Tamara yesterday, who was enthusiastic and happy about her job, felt like a distant memory. I wondered if she had been joking or if they had told her who I was and what I was doing there. Faced with Abiba's and Maria's exhausted expressions and feeling the fatigue myself after three hours of standing and nonstop work, it seemed absurd that anyone could describe this as "*pleasant and relaxing work"* as Tamara did the day before. *"I'm tired and hot,"* Abiba told me after I introduced myself and asked how she was. Besides the strain of standing in one position for such long periods, the heat made the work truly unbearable. Even though it was mid-October, temperatures

were still around 25-30°C, and the heat was palpable. Abiba also wore a hijab, which didn't help. She told me she's been in Italy for about four years, that she's Tunisian, and that before working in the warehouse, she did cleaning work in a hotel in Ragusa, where she lives. Her entire family works at Ecor: her husband in the greenhouses and her 26-year-old daughter, who started working in another warehouse downstairs last year. "*I'm tired of this job; it's very hard for me, and last year I even fell ill a couple of times during Ramadan*." Maria joined the conversation and added, *"Yes, because during Ramadan, it's even harder to work—no food, no water, and the heat. I remember she fainted last year. When you work 11 or 12 hours a day, sometimes even 13, it becomes hard to keep up with that pace."* After the short break, we resumed working without any further pauses until 8:30 PM. We continued cleaning and cutting zucchini, sorting them by size and client requirements, because, as Tamara said, "*Different clients, different processes*." The final task was for a particularly demanding client—Demeter—who required that every zucchini be perfect, with no marks, and that a sticker be placed on each one. The work seemed endless. At 7:30 PM, the pallet with the zucchini was full, but the conveyor Strip kept bringing crates. I started worrying that we'd have to process the entire two-meter-high pile of crates on the pallet at the start of the line. While we worked, my colleagues began chatting about the next day's schedule. "*Tomorrow, they're calling us in at six in the morning*," said Fatima. "*Yeah, they might as well have us sleep here,"* another replied. "*Tomorrow's Saturday*," I thought. "*Stefano told me they don't work on Saturdays*." I asked Maria if they work Saturdays too. She said yes that the only day off is Sunday, but Saturdays are always workdays. I wondered if Stefano had avoided telling me this to make a good impression. Meanwhile, the work continued, and we were all increasingly exhausted. I overheard murmurs among the others. "*Mrs. Rosalba felt bad,*" Maria told me. "*I told you—it's tough work."* Indeed, Rosalba, an Italian woman of about 60, had been complaining earlier about feeling very hot and itchy all over. The itchiness, I think, is partly due to the "medicines," as the laborers often call the chemicals used on the plants. In some cases, as other workers explained to me, even the eggplant leaves leave a powdery residue on the skin that can cause irritation. At around 8:30 PM, we were told we were done and could leave. I started cleaning my station—just as I had the day before—and swept the floor. Everyone seemed eager to leave, and we all looked exhausted. I headed to the lockers with a crate of discarded vegetables I had picked up. These were considered waste because they weren't pretty enough for the market but were still good to eat. Tamara had told me I could take them home without any issues since they'd otherwise be thrown away. But Maria stopped me when she saw me carrying the crate. "*Don't go down there*

with that," she told me. *"It's better if they don't see you.*"

(Field notes, Marina di Ragusa, October 13, 2023)

The pages from the fieldwork contain several references to the physical strain and the exhausting working conditions within packaging warehouses. The work tasks are particularly challenging for the older workers who often struggle to keep up with the required rhythms. The fatigue is further exacerbated by the high temperatures that persist even in October, when the period of participant observation within the packaging warehouse was conducted. In essence, packing facilities and labour tasks inside these warehouses bear significance resemblance to traditional Fordist factories. Workers station along processing lines wearing uniforms and hairnets and operate under the supervision of managers and of other workers who are responsible for overseeing performances, checking the quality of the selected products and pressing workers for maximizing their efficiency. On this regard, Seth Holmes' (2013) reflections, emerging from his extensive ethnographic research among Mexican farmworkers in California's agrifood sector, provide crucial insights. Holmes places the body at the very center of his analysis, examining its relationship with labour and therefore stressing how this is correlated to the emergence of pathologies and diseases that are linked to working conditions. To this extent, he demonstrates how the normalization of exploitation and suffering inherent among migrant farmworkers undermines even more the consequences of bad working conditions. Adverse effects on health and the emergence of pathologies, also demonstrate how the normalization of exploitation and suffering inherent among migrant labour is even exacerbated by an unequal access to healthcare and by the differences that are experienced by female and male workers. Building on Holmes' analysis, also Piro and Sanò (2019)[74] propose an expanded reflection that considers how workplace pressures and exploitative conditions become inscribed on the bodies themselves although the subjective positioning of the worker is also shaped by ethnicity, gender and class. For instance, the

[74] The article by Giuliana Sanò and Valeria Piro (2019), placing the body at the center of their work ethnography inside the Sicilian greenhouses, considers it both an object and a tool for field research. Starting from their ethnographic experience of the fatigue and heaviness of the fieldwork, they underline how the body, particularly for women workers in greenhouses, becomes an element of negotiation in a mainly male environment and working context. Starting from the relationship of workers with their own bodies it is therefore also possible to trace the lines of stratifications that act on living work in a differentiated way. In particular, exploring the context of day labourers, the authors refer to the tendency of day laborers employed in greenhouses to push their body to its maximum potential, trying to appear as good as possible in the eyes of the employer so as to be called back the following day.

strict sexual division of labour, with men mainly employed in greenhouses and women in warehouses, exposes men to different risk factors and to different diseases.

The exploitation and manipulation of time is the variable on which managers insist more for increasing workers' productivity and therefore speed up labour processes to finish customers' orders quickly. Once the totes are assembled and prepared by the individual workers, they are placed on a roller that transports them to the end of the processing chain where the totes are checked by those responsible of the chain and then loaded onto pallets according to customers' orders. Each pallet therefore corresponds to a different customer. As the workers work on the packing lines, the finished pallets are packed and transported outside the warehouse before being loaded onto trucks and transported to customer or distribution platforms (such as the EcorNaturaSì hub in the Bologna interport). Compared to the work within the greenhouses, the connection and continuity with subsequent segments of the supply chain are much clearer for workers in the packaging warehouses. Initially, this is evident in how the finished product leaves the warehouse. In the greenhouses, products are harvested uniformly, undergoing an initial selection to remove rotten or visibly damaged items, and are then placed in large crates destinated for warehouses where further sorting and packaging occur. Workers in the greenhouses handle products knowing they will be rechecked and sorted before reaching the customer. In contrast, in the warehouses, the continuity with external elements and subsequent segments of the supply chain is ever-present and significantly influences the workflow along the processing lines. This "external" presemnce affects individual tasks based on specific clients' requests. The three different processing procedures required, depending on client type and product quality, exemplify this. Thus, and "external intervention" significantly impacts warehouse work, standardizing processes and adding an element of standardization that are directly linked subsequent supply chain segments.

Figure 19. The warehouse of the farm where the participant observation was conducted

(Picture by Giulia Magnano)

Despite the high degree of unpredictability inherent in warehouse work – particularly concerning shift lengths, as noted in the field observations and emphasized in the aforementioned sections – this continuous connection with subsequent segments of the supply chain introduces a level of predictability regarding the tasks to be performed along the production line. Indeed, the processed goods are sorted and categorized according to quality, shape, and colour and then allocated to diversified market segments with differentiated pricing in accordance to the specifications provided by the client. An additional layer of complexity within the packaging process is also introduced by the requirements of the organic and biodynamic certifications which impact also on greenhouses operations, where the organic approach mandates increasingly

stringent preventive measures, resulting in an increased workload for farmworkers and warehouse workers.

> "Here, production must respect some specific criteria. For instance, we have a yellow cherry tomato which must respect three criteria concerning the colour, the size and also the taste and therefore the level of acidity and sweetness which are measured in Brix degrees. Therefore, I must use this instrument that is called refractometer, which allows me to measure the amount of sugar within the water. Because some supermarkets just tell you they they want their tomatoes to "measure at least 7 brix degrees". Therefore, you must harvest and grow them in order to reach that flavour. And you must use different techniques depending on where you grow them, on the type of soil you have and of the species of the plants".
>
> (Interview to organic and conventional farmer. Niscemi, June 1st, 2023)

Therefore, the standardization of products requested by the final customer, is translated into a standardization of workers practices which to some extent increases the level of predictability in labour practices and tasks. This predictability is primarily facilitated by the standardization that enables workers to clearly understand the specific processing requirements at the outset of each task based on customer orders. During my time in the warehouses, the beginning of each processing task was always announced in the same way. The line supervisor would call out the number of crates to be prepared and the name of the clients, typically referring to the associated supermarket's name. This procedure ensured that workers were always aware of the processing requirements associated with each customer. Such a method not only expedited the workflow by eliminating the need to explain individual procedures but is also implied a standardization of requests from final clients, fostering a degree of recognition and predictability among the workers. Ultimately, this practice led to the emergence of preferences among workers for certain types of processing and specific clients, reflecting their perceptions of the ease or complexity of various tasks. For example, among the favored task was the processing of cherry tomatoes (*pomodoro datterino)* which were generally delivered already detached from the vine in large containers, allowing for straightforward selection process based on weight, while ensuring uniform color and size. Conversely, the work involving grape tomatoes (*pomodoro cigliegino*), which requires handling them with the entire stem, tends to be tedious and time-consuming. Similarly, processing

"perfect" zucchini often involved the added requirement from clients to attach "organic" labels to each individual vegetable.

Therefore, this external factor not only directs work processes based on order types and product quality requested by clients, but also increases and diversifies the workload of the workers along the processing line by introducing forms of "external" control related to client satisfaction or dissatisfaction with the work performed.

> "As we're working, Alessia – the administrative employer that is responsible of the activities within the warehouses – enters in the warehouses with a very angry mood, holding two crates of pomegranates like those we processed on Friday. She picks up two slightly blemished pomegranates, with some brown spots and starts yelling. *"Can you explain me you thought you to handle the pomegranates in this way? Do you really think we can sell this?"* she asks, holdig a crate of large, vibrant red pomegranates that looked almost painted. We all freeze, rest in silence, standing without moving but I could really feel that the other workers were glancing at each other with suspicion- "*This is the second time we've lost a client because of this. We can't afford it anymore, understood? We need to be more careful and work better because this is unacceptable"*.
>
> (Field notes, Marina di Ragusa, October 16, 2023)

Therefore, forms of control "from the outside" are integrated within the workplaces and translated in employer-worker relationships but also in forms of surveillance and control exerted among workers themselves. Indeed, informal surveillance is also exercised by certain workers within the packaging line. Such dynamics reflect the strategies of control that, as Sennet (1999) suggests, stems from an indeterminacy that is not only economic and labor related, but also deeply social, psychological and human. An illustrative example of this dynamic can be observed in Maria's expressed fear of being sanctioned for attempting to take home discarded vegetables – a practice that, on several occasion, has been explicitly authorized by the supervisors themselves. The work environment inside packaging warehouses is thus characterized by a particularly high level of pressure and control, which frequently exceeds that exerted in the greenhouses. Beside the forms of control that intervene from the outside, the period of participant observation inside the warehouses also showed how forms of control that are reproduced inside the warehouses and among workers, are also translated into a culture of mutual competition and surveillance among

workers, which has partially influenced the overall access to the field and the relationship with the other workers.

> "Today, during the shift, the foreman called out the other colleagues after a crate full of good eggplants was mistakenly placed among the discards. I realized that Tamara plays a somewhat peculiar role among the workers, a kind of supervisory role over her colleagues. Formally, she's a worker like the rest, with the same contractual classification and performing the same tasks, but she often addresses her peers with a tone of superiority that verges on control. Maurizio then retrieved the crate of intact eggplants and started asking, *"So, who was it? Why are these here? Who put the good eggplants among the discards?"* Silence. We all looked at each other, but the crate must have come from the opposite side of the production line, far from where I was stationed. No one answered, and after a while, Tamara shouted, *'Come on, who did it?'* Still silence. *'Do we need to do what we used to do? Mark the crates with numbers so we know whose they are? Come on, who did it? No one? But I know who it was. I saw who did it. Always remember, even if I don't say anything, I know who it was*.' Silence. No one stepped forward despite Tamara's 'intimidations. Apparently, someone must have implied it was me—the newest member of the team—since Tamara turned to me to reassure me, saying, *'That crate must have come from the other side, don't pay any attention to them*'"[75].
>
> (Field notes, Marina di Ragusa, October 16, 2023)

Even in the companies lacking advanced technological systems, worker surveillance is effectively implemented through strategies such as tracking crates or with the implicit threat of introducing such methods to impose higher accountability and traceability of workers. This environment of control can sometimes foster a competitive atmosphere, which in turn may create mistrust among colleagues. In certain instances, workers advised me to avoid attracting attention or speaking too much, cautioning that "if you're new, they won't help you, so it's better to stay cautious". Such attitudes can lead to a form of worker atomization, undermining the development

[75] On the role of internal competition and resistance among employees, see Piro (2020:32). Drawing on ethnographic research conducted within packaging warehouses, Piro highlights the challenges of conducting research in such workplaces, stemming not only from resistance by employers but also from resistance by female employees and workers on the production lines. Similar to the experiences described in this study, Piro observes how colleagues perceived their ethnographic work as a form of competition and rivalry, which they sought to obstruct.

of collective strategies (Peck and Theodore, 2010) and exacerbating control mechanisms initiated by workers themselves.

The informal talks conducted during working hours and during the brief breaks, also revealed a progressive loss of control over time and personal lives among workers. Indeed, the highly flexible and the precarious nature of workers working conditions, often prevents them from predicting the duration of their workdays. Instead, they receive daily updates regarding the start of their shifts in the warehouses. A common sentiment expressed in the testimonies is that warehouse work schedules are often unpredictable and characterized by demanding and frequently longer shifts than those in greenhouses. This unpredictability makes warehouses labour significantly more burdensome compared to greenhouse work, which tends to maintain a stable duration of around eight to nine hours per day[76]. Additionally, the rhythms and scheduling of work within these companies varies considerably depending on the time of the year. During the observation period at the production facility in mid-October, the work rhythm remained relatively calm, as production had not yet peaked, and harvest volumes were modest. This is typically due to the summer months being dedicated to cleaning and soil preparation for the next production cycle in the greenhouses.

> *"Now it still happens that we get a half day off",* the workers tell me during one of the lunch breaks spent in the small dining room adjacent to the warehouses. *"It's not guaranteed that they'll call you every day right now, but in a month, it will be different, and when the greenhouses are running at full capacity, it's terrible. From March to June, its' the worst period. We work 12, 13 hours a day because there's so much product to ship, so much work. The problem is that when you start, you never know when you'll finish". "So does it*

[76] Typically, the start time for shifts is communicated the evening before for morning shifts and around midday for afternoon shifts. Druign my observational experience within the company, however, I appeared to be threatened differently compared to other workers, particularly regarding work schedules and hours. These differences, in some ways, influenced my ability to establish good relationships and be perceived favorably by the other workers, who likely began to view me as "privileged" do to the fewer hours I worked. "*On Saturday, I didn't receive any message about coming to work, even though I had been told that Saturdays were generally workdays. Nor did they notify me on Sunday, Fortunately, I had set an early alarm on my phone, and indeed, I receive a message from Alessandra – the personnel manager – saying. "Good morning, today we start at 7.30. If your colleagues haven't informed you, you can come at 9.30". Since I use to live 40 minutes by car from the warehouse, it was impossible for me to make it on time for the earlier shift. I packed my lunch, got dressed, and started driving, planning to begin my shift at 9.30. The house where I was staying, adjacent to the greenhouses, was already bustling with people bent over the tomato fields. Through the plastic sheeting, I glimpsed some laborers sitting on small stools, while other stood. I assumed they were attaching the wires for the tomato plants to grow and climb. As I drove, I reflected on how this differential treatment wasn't helping me build rapport with the workers. They didn't call me to work on Saturday – I was sure they had worked – and now I am arriving late, while the other had already been working for two hours. I imagined this would make them view me unfavorably, further complicating my efforts to gain their trust.*

happen that you bring your lunch, but you still don't know exactly if you're going to eat here or not, for instance" I ask. *"Yes, exactly. Actually, it's only now that we're doing half days. Later, as the pace picks up, that almost never happens. But yes, usually when we arrive here, we never know how long we'll stay. There have been times when we stayed until midnight, when things weren't going well".*

(Notes from the fieldwork, Marina di Ragusa, October 20, 2023)

The rhythms and timing of work are therefore significantly influenced by the market dynamics that govern operational practices, primarily driven by the needs of end customers. As one of the company's partners explains, the geographical distribution of clients – predominantly in Northern Italy and, in many cases, abroad, particularly in France, Germany and the Netherlands – exerts a substantial impact on the pace of work. This influence is especially pronounced in a company that generates most of its profits from production conducted outside the traditional peak season.

"We try to organize our work based on the interconnections of the market. There's no point in going from nothing to harvesting everything all at once. It doesn't make sense because you must coordinate with the clients, wait for the production in the North to finish – because right now, for instance, they still have tomatoes – and therefore organize the warehouse to gather all the necessary labor. Over the years, we've learned how to manage these situations. Naturally, those who can prioritize local production prefer to buy zero-kilometer produce, so it's up to us to adapt. Since we generally sell abroad to Northern Italy, we also tend to focus primarily on off-season production, when they no longer have tomatoes or zucchini. That way, we can earn more and charge higher prices".

(Interview to S., organic producer and member of the company where the participant observation was conducted. Marina di Ragusa, October 19, 2023)

In this context, A., emphasized that the adoption of advanced technologies – such as electrical ventilation system for greenhouses and adjustable trolleys designed to accommodate varying work heights – can significantly reduce the physical strain associated with agricultural labor. These innovations not only enhance operational efficiency, but also signal the capacity of a company that, while adhering to organic standards, has established itself as a regional leader capable of investing in cutting-edge technologies that may also improve working conditions for employees. However, the widespread implementation of such technologies among local agricultural

enterprises seems improbable, particularly given the prevalence of small-scale farms in the area, over half of which cultivate less than 20 hectares.

3.2. The *normalization* of the unemployment subsidy trick: structural dependencies and institutional constraints in the Transformed Littoral Strip

Agricultural unemployment subsidy is another instrument that reinforces the stratification of the workforce, especially in a socio-economic context such as that of the Province of Ragusa where the entire economy is based on the agricultural sector and where the system of norms and practices is deeply eradicated and difficult to dismantle[77]. The instrument of the agricultural unemployment subsidy, originally conceived to guarantee a continuous economic support to seasonal workers in agriculture, is transformed in this context into a form of employer's benefit, which is one of the main causes of the phenomenon of grey labour[78] in the area. In the context of Ragusa, where agricultural production is deseasonalized and operates in a continuous cycle, the underlying logic of agricultural unemployment mostly loses its meaning, and this device is in most cases used to fuel irregular forms of employment. In fact, workers are often employed for a minimum of 102 working days, a necessary condition to qualify for agricultural unemployment, but outside this period their working conditions remain in most cases precarious and informal.

> "Agricultural work works like this, and it's the only sector that works this way. On the paycheck, the worker's actual working days are recorded because it's expected that, for example, in the countryside it might rain on one day and you don't work, or there's a harvest for two or three days and then you have to stop... so it's a very specific sector. For example, if I work three days a week in a month, at the end of the month I'll have 12 days of work that the employer will pay me for. These 12 days are then added to those of the other months. If I collect 102 working days by the end of the year, by law I can access agricultural unemployment benefits, which are provided by the State. These benefits are based on the number of working days, but also on family responsibilities, qualifications, and a whole range of factors. These 102 days could be actual,

[77] Other contributions that have emphasized the role of agricultural unemployment subsidy in the context of Ragusa. For instance Giuliana Sanò (2018) *'Plastic factories. Labour in industrial agriculture'* (pp. 43-44).

[78] In the greenhouses of the province of Ragusa, it is estimated that around 60% of the workers are involved in undeclared work, i.e. completely illegal work without a regular contract. Alongside this situation, there is an equally significant spread of grey labour, where employers declare only part of the days actually worked by workers. In general, the number of working days declared is at least the minimum required for workers to be eligible for agricultural unemployment, i.e. 102 days.

meaning I really worked those 102 days, so during the period I receive unemployment I don't need to work. Or, as usually happens here, if I work for a company 300 days a year, only 102 days will be recorded on the paychecks, so the rest of the days I'm working irregularly and my working days are not recorded. But in reality, I'm "paid" through the unemployment benefits provided by the State, while I continue to work for the same company, which sometimes pays me while I'm on unemployment, and sometimes doesn't. This is a perverse mechanism that fuels exploitation and, at the same time, leads to a huge loss of money for the State... what's needed are controls to check how many people a company hires in proportion to the land it cultivates. Because if you have a small company, 5000 square meters, and, let's say, it results you only have hired three Romanian workers, that might work... but if you have a large company that supplies the big markets or large distribution three or four times a year, and therefore you need many people to plant, sow, and harvest, how is it possible that you can do all this work with just three workers hired for 51 days a year? It's impossible, so obviously those workers are employed for 11 months a year... it would just take cross-checking the data to control this whole system. Now, I understand that it's possible to do this on a single company basis, but it's a whole different story when you have to check 6000 companies and 2800 people. So, in the end, the employers know that they will never be caught because, to get caught, you'd have to be incredibly unlucky. Furthermore, in the province of Ragusa, there's only one labor inspector; so, you literally have one chance in 6000 of being caught."

(Interview with the USB union secretary of Ragusa, Ragusa, June 28, 2023)

During the interviews conducted during the research period, it became clear, both from the testimonies of trade unionists and workers and form the statements of producers, that recourse to the agricultural unemployment subsidy is perceived as a consolidated and normalized practice within the agricultural economy of the province of Ragusa. Rather than being an exception, it seems to be integrated into the local production and labour dynamics, further consolidating the structures of irregularity that characterize the sector.

"Here the unemployment subsidy trick is the norm. You work a minimum of 102 days and then you get the unemployment subsidy. But you work every day at the end. […] If you work 102 days on paper and then you get unemployment, at the end it is as if the other days you get paid by INPS. Only on paper if you declare 100 days and work 300 days even if you take all the money (from INPS

and the employer), it turns out that you are unemployed. This is the big problem in Italy. And it is also linked to the fact that there are no open-ended contracts even though many would like them. Because the fixed-term contract gives you no chance. Because you can't get financing, you can't get a mortgage for a house…that's why you look for solutions, for example through unemployment. But here this doesn't make sense, because it's not like with citrus fruits, or wine where agriculture is seasonal. Here it works differently because those who work in greenhouses always work"

(Italian farmworker. Vittoria, 30 I giugno, 2023)

On the side of farmworkers, although they are well aware of the inherent limitations of this mechanism - both in terms of real earnings and in terms of employment and social security guarantees - the alternation between periods of unemployment and fixed-term contracts, which offer no long-term security, has made this practice so widespread, that in some cases agricultural unemployment is perceived not as a State subsidy but as an integral part of the wage. This perception has then spread to a context where the seasonality of crops is reduced, further reducing the motivation for such an extensive use of agricultural unemployment subsidy. From the point of view of entrepreneurs, the use of unemployment subsidy appears to have become so normalized that many respondents are quite open about the irregularities that result from this. However, there is a tendency - often widespread among the employers interviewed - to shift the responsibility for such practices, attributing them not so much to the local entrepreneurial class, but rather to a form compulsion dictated by the demands of the workers themselves and the trade unions. The latter are in fact perceived as the main beneficiaries of the system, thus helping to consolidate the dependence and legitimacy of these mechanisms in the local production system.

"Everybody knows how agricultural unemployment subsidy works. Agricultural unemployment subsidy stems from the fact that operators, agricultural workers, do not work all the time. So, if they work 100 days, then the state pays them the unemployment subsidy for the remaining days. But, in reality, this does not happen because in the end even if they work every day, then it is declared to the state that they work for a maximum of 180 days, which is the maximum. Everyone does that and then the worker also gets unemployment. This is a plague for us entrepreneurs, because we don't want to do this, also because by doing so, we are not 100 per cent in compliance. And the trade associations have also asked the unions to fix this, but they have no interest. [...]

> And the unions don't want to know about it also because in this way they make a lot of money every time that they have to go through the producers for the unemployment subsidy claims. Because if you take away all these procedures (from the unions) they shut down. And this is a serious problem, also because if you don't do this, the workers don't work for you, because they want the unemployment subsidy. It's a consolidated thing. And in the end, it's the State that loses a lot of money...the only ones who gain are the unions, and we (the companies) are not 100 per cent compliant"
>
> (Interview to a farm entrepreneur. Niscemi, May 31st, 2023)

On the other hand, in addition to the deseasonalization of agricultural practices, that characterizes local production, a decisive factor in the spread of the unemployment subsidy trick, is the central role played by the agricultural industry, and by the greenhouse industry, at a territorial and provincial level. Indeed, as this trade-unionist argues, the pivotal role of this sector within the local economy helps to legitimize and consolidate practices that, although irregular, are perceived as functional for maintaining the economic and employment balance of the territory.

> "Here the problem is not so much that there are no unions, organizations, or parties that are corrupted or that have no interest in dealing with problems such as unemployment, illegal forms of work, exploited labour…in the province of Ragusa the CGIL has 15 branches, and there are 12 municipalities. Even in the local political class there are good people, there are even comrades. The problem, however, is that it has been chosen not to deal seriously with a whole series of issues, starting with the unemployment subsidy, because otherwise you have to deal with the economy that supports this province and then it becomes really difficult because it is not just the individual producer the problem. Because here it's different compared for instance to Borgo Mezzanone, because Puglia is not based on the production of Borgo Mezzanone, Calabria is not based on the production of Rosarno. Certainly, they are important, but the economy does not rest on that alone. Even in Sicily, Syracuse does not rest on the economy of Cassibile alone[79]. So, there it would be easier to address these issues. Then it

[79] Borgo Mezzanone (Foggia), Rosarno (Reggio Calabria) and Cassibile (Syracuse) are three Italian provinces where agricultural production is particularly intense. These are territories where agricultural production, in contrast to the Ragusa area, is mainly based on seasonal labour, on a strong presence of informal contracts and forms of 'caporalato' (forced labour), which in most cases are combined with a constant and continuous wage compression to reduce production costs (Perrotta and Raeymaekers, 2022). In these contexts, workers often find themselves moving between different locations depending on the season, generating circular routes legal to the seasonality of the crops: from the

> doesn't even happen there that the political and trade union take a clear stand, but still, it would be easier. Here, however, it is very different, because here you are faced with a system that relies solely and exclusively on that: on agriculture, which in turn relies solely on exploitation. Because otherwise these 6,000 companies would never be able to stand up to globalization and other more competitive companies. They would really have to close and look for new work, thus for the entire local economy. The second problem also relates to the transformation of trade unions, where members no longer count and the money comes from services: the CAF, the patronages, everything is based on that…the whole trade union bureaucratic apparatus is based on that, the salaries come from that. And so if you have a trade union in the territory whose first objective is to do as much paperwork as possible because it has to make money, you cannot take sides against the entrepreneurial class in that territory, or against the political class in that territory, ot against the workers, criticizing for example agricultural unemployment. You cannot do that and therefore your hands are tied".
>
> (Interview with trade union secretary of Ragusa. Ragusa, June 28, 2023)

The interview with the trade unionist highlights how the problem of agricultural unemployment is intrinsically linked to the local production logic and the challenges that the various stakeholders face against such a deeply entrenched practice, which is simultaneously essential for sustaining the local agricultural economy. In a context characterized by the restructuring of production chains within increasingly competitive global markets and the transformation of businesses and political interests that are oriented towards promoting local development, the needs of the workforce lose their centrality, especially when workers agree to participate in the unemployment system. As Giuliana Sanò (2018:124) observes, the agricultural unemployment system operates in a differentiated manner depending on the profile of the workers. In particular, the coercive nature of this mechanism is most severely experienced by non-EU workers, who, due to migration flow regulations, are subject to the unemployment system and even resort to purchasing the necessary workdays to meet the minimum threshold and avoid situations of irregularity or illegality that could jeopardize their stay in Italy.

olives of Campobello di Mazara in autumn, to the oranges of the Gioia Tauro Plain in winter, to the potatoes of Cassibile in spring, to the tomatoes of Foggia or the fruit of Saluzzo in summer (Anderlini, 2022).

In this context, the State plays an ambivalent role, acting almost as a mediator between employers and employees, regulating wage labor through a welfare system that exploits the regime of deportability (Peutz, De Genova, 2002). In doing so, the State ends up facilitating the creation of informal or illegal spaces and practices. On the other hand, local employers often exploit this mechanism to discredit workers, particularly foreign workers, thus justifying anomalies in labor relations. However, this system is extremely disadvantageous, especially for employers, as it allows them to transfer part of the labor costs to public subsidies. The number of workdays declared in contracts thus becomes a crucial point of negotiation between workers and employers, determining the amount of unemployment benefits to which workers are entitled. In this regard, as Anna Cortese (2020: 88) emphasizes, the stratifications within the workforce play a decisive role, significantly influencing access to welfare tools such as agricultural unemployment benefits. The data presented in Table 12 reveal some significant trends regarding the number of annual workdays reported by Italian, Tunisian, Romanian agricultural workers, and those from other countries classified as high-emigration (HEC) countries according to the World Bank. An increase in workdays is indicative of both the degree of deseasonalization of agricultural work and the greater stability of workers in the Ragusa area. Moreover, the economic subsidy resulting from agricultural unemployment is proportional to the number of workdays reported annually, thereby incentivizing an increase in the number of registered workdays. According to INPS data[80], the average number of workdays for Tunisian workers is very close to that of Italian workers and significantly higher than that recorded for Romanian workers or those from other HEC countries. However, when examining the data regarding workers who exceed 150 workdays annually, a substantial difference emerges between Italians and Tunisians, with a clear advantage for the former ones. At the same time, Tunisians represent the lowest proportion among workers employed for less than 50 days per year, a category that includes almost a quarter of Romanian workers and those from other HEC countries. These data reflect on one hand, the different stratifications within the agricultural labor force and, on the other hand, the role of contractual dynamics and subsidy policies in shaping labor conditions and the degree of worker permanence in the region.

[80] The data provided by the INPS, like those of other statistical institutes, have significant limitations in providing a full picture of the dynamics of agricultural and informal work. These statistics are based almost exclusively on official information, such as regular contracts and pay slips, and therefore do not include situations of contractual or wage irregularities. This restriction excludes, for example, workers who work in undeclared conditions, without any contract or legal protection, and those who are subject to underreporting of days worked or actual wages.

Table 7. Number of people employed by days worked during the year, gender and country of origin in the municipalities of the TLS

	Italy			Tunisia		
	Men	**Women**	**Total**	**Men**	**Women**	**Total**
0 - 50 days	13,9	20,1	15,8	8,2	19,2	9
51-100 days	10,9	18,2	13,1	15	29,7	16,2
101-150 days	35	35,7	35,2	55,8	38,4	54,5
< 150 days	40,3	25,9	36	21	12,7	20,3
Total	5160	2221	7381	2680	229	2909
Average days	**114,4**	**98,4**	**109,6**	**107,5**	**86,3**	**105,8**
	Romania			**Other HEC**		
	Men	**Women**	**Total**	**Men**	**Women**	**Total**
0 - 50 days	25,6	26,9	26,2	24,2	24,6	24,3
51-100 days	20	22,3	21,1	15,4	23,1	17,1
101-150 days	43,7	42,6	43,2	35,7	34,6	35,5
< 150 days	10,6	8,2	9,5	24,6	17,8	23,1
Total	1646	1311	2957	1209	338	1547
Average days	**81,7**	**78,1**	**80,1**	**94,5**	**85,8**	**92,6**

(Source: Palidda, Cortese, 2020:38. Elaboration from ISTAT data)

The data and interviews collected indicate that the opportunities for social mobility, employment and precariousness faced by agricultural workers in the Transformed Littoral Strip are significantly influenced by the stratification of the labour force. This stratification is shaped not only by migration policies but also by labour policies. The resulting differentiation and hierarchy are primarily reflected in the varying migration trajectories and experiences of workers. These differences, in turn, impact not only their incorporation into employment, but also the conditions of their social reproduction. These dynamics manifest in unequal access to essential services such as adequate housing, transportation, education and healthcare, which will be further analyzed Chapter 7. The intersection of these factors contributes to the persistence of inequality and

precariousness, significantly restring migrant workers' opportunities of emancipation and integration.

4. Workers' organization and struggle within the workplaces.

As emerged in the previous sections, one of the most prominent strategies adopted by agricultural and logistic workers, particularly migrants, to resist or escape exploitative and arduous working conditions is the strategic use of mobility as a form of power. To this extent, Alberti and Sacchetto's (2024) conceptualization of mobility and turnover as collective forms of resistance offers an important framework for understanding these practices. Rather than framing mobility and turnover as individualistic behaviors, they emphasize its collective dimension, challenging the reductionist view of mobility as merely a personal response to adverse conditions. From this perspective, a growing body of the literature has explored the complex relationship between labor mobility and the restructuring of the agri-food sector (Lo Cascio and Perrotta, 2022; Peano, 2020; Medland, 2016; Parker, 2014). By conducting long period of observation within the agricultural sector in Basilicata (Southern Italy), Perrotta (2019) confirmed that mobility is a constant element in the lives of migrant workers in this context. Workers employed in the fields are continually looking for opportunities to escape the countryside, and their mobility challenges an industry that is likely to experience major crises in case of labour shortages, with farms and enterprises risking the loss of an entire year of work and investment. On the other hand, it emerges how migrant's opportunities to move from one place to another are not homogeneous, and the main difference is that between European and non-European citizens.[81] These studies examine how mobility is enacted, managed, filtered, and directed to provide labor for agricultural enterprises – and, in certain instances, to facilitate the return of workers to their countries of origin. Piro (2020), for instance, underscores that for migrant workers employed in agricultural enterprises in the Ragusa region, transitioning between employers represents a primary strategy of mobility, often deployed as a key strategy within capital-labor relations. Similarly, Alberti and Iannuzzi (2020) observe that

[81] Perrotta's (2019) study also stresses how the continued strain on mobility acted by migrant workers also shows the lack of a component of identification with their class position, and the lack of attachment to the territory where they are working and living. The other strategy migrant workers often use, is that of "dissimulation" (or pretense) that is expressed, for instance, when workers "pretend to be ragged" (lit. *straccioni*) in order to more easily convince employers to hire them for the day. In this sense, migrant laborers while not publicly expressing their disagreement with the labor practices imposed on them by their employers, develop "secret minutes" through which they develop their own oppositional culture that deos not always emerge publicly.

migrants engage in mobility not only to escape exploitative conditions but also to navigate between jobs, transition across sectors, or pursue onward migration. The trajectories of mobility and the exercise of *mobility power* by migrant workers are closely intertwined with how broader migration and labor policies reinforce the segmentation and stratification of the workforce. These policies are pivotal in sustaining a highly flexible, underpaid, and just-in-time labor force (Anderson, 2010; Mezzadra and Neilson, 2014). Central to this process is the differentiation of workers' legal statuses based on their countries of origin, which leads to stark disparities in employment opportunities, wage levels, and transnational mobility. In the Ragusa region, significant differences exist among Romanian, Tunisian and Sub-Saharian African workers. These disparities are largerly attributable to the European citizenship of Romanian workers, which has enabled their gradual relocation to other countries.

The ongoing migratory processes involving Romanian workers has profoundly impacted wage conditions for agricultural laborers remaining in the Ragusa region. As emerged from several interviews collected during the fieldwork in Sicily, the arrival of thousands of Romanian workers in the early 2000s precipitated as a sharp decline in wages, their subsequent mass departure created a crisis for employers, who faced significant challenges in compensating for the reduced labor supply. As a result, employers were compelled to increase wages and daily pay rates for agricultural workers. Interviewed farmworkers in Ragusa consistently described these wage fluctuations: the initial influx of Romanian workers had driven wage downward—particularly for irregular migrants or asylum seekers—whereas their gradual departure lad to a subsequent wage increase. Alberti and Sacchetto (2024), emphasize that the concept of mobility power is rooted in a collective logic aimed at circumventing mechanisms designed to control migrant labour. However, the exercise of mobility power by migrant workers also destabilizes and makes labor market structure unpredictable, both at national and international levels. This instability disrupts the local entrepreneurial class's pursuit of predictability and structured organization. Instead, it operates within migrant social infrastructures that facilitates the emergence of new mobility trajectories. These infrastructures – involving recruiters, brokers, temporary employment agencies, and personal networks – empower migrants to navigate and manage their migration independently of the national and international policies that seek to regulate and constrain these movements (Xiang and Lindquist, 2014). In response to this instability, both employers and states continuously attempt to reorganize and redefine tools and strategies to ensure a steady supply of low-cost labor.

This is often achieved through international migration policies that allow for the entry of various categories of workers tailored to meet the needs of fragmentated labor markets or by fostering the informal labor markets where undocumented workers can be easily exploited (McCollum, Findlay, 2015; Anderson, 2010; Fudge, 2011). From this perspective, even the reliance on unemployment subsidy as a supplement to precarious and predominantly underpaid working conditions, seems essential to maintaining a labor force willing to accept low wages. This dynamic, in turn, enables capital to sustain a labour system characterized by enduring precariousness and systemic underpayment.

Similarly, the outsourcing of logistics and porterage activities appears to address the need for a continuous supply of flexible and underpaid labor, particularly given the high turnover rates that characterize these roles in fruit and vegetable markets. Therefore, the evolution of increasingly diversified forms of labor and production organization – often reflecting the coexistence of multiple entrepreneurial actors within the same workplace – has a profound impact on working conditions (Bubbico and Di Nunzio, 2023). In addition to the flexibility intrinsic to subcontracting relationships, where third-party companies frequently adopt predatory practices to maximize profits through labor exploitation, one of the main strategies adopted by workers to improve their conditions is the exercise of mobility power. In line with existing literature on labour within the logistics (Benvegnù, 2018; Bologna and Curi, 2019), fieldwork interviews revealed high levels of turnover as a defining feature of logistics and porterage work within horticultural markets. These environments are marketed by precarious employment conditions, extensive fragmentation of labor and the workforce, and the coexistence of multiple contractual arrangements and varying levels of labor regulation. These challenges are exacerbated by the physically demanding nature of the work, particularly given the nighttime schedules that are intrinsic to market operations. Moreover, this fragmentation undermines the development of effective and inclusive union networks, thereby complicating efforts to organize collective action aimed at improving working conditions. These challenges are compounded by physically demanding workloads, particularly due to the nighttime schedules typical of market operations. Such fragmentation also hinders the development of effective and cross-cutting union networks, making collective action to improve working conditions much more difficult to organize.

At both the Padua and the Bologna market, employment in logistics and porterage has a high degree of diversification, with the majority of roles externalized to third-party subcontracting

companies responsible for specific services in loading and unloading areas, as well as within operators' warehouses. These positions are predominantly occupied by migrant workers, who comprise most of the warehouse labor force. In certain cases, however, warehouses directly employ workers, particularly when this strategy serves to mitigate tensions with unionized laborers or to build trust with long-standing workers initially employed through cooperatives. As Piro and Sacchetto (2020) note, outsourced employees often work within the same facilities as directly hired personnel, though their activities are carried out in separate yet adjacent spaces. This segmentation and coexistence – which is also typical of work within fruit and vegetable markets - couples with the proliferation and diversification of employers and creates substantial challenges for organizing collective worker claims. These dynamics often result in fragmented and, in many cases, deeply racialized forms of mobilization. The research conducted at MAAP and CAAB provided a particularly illuminating case study, as it enables an in-depth examination of how outsourced workers mobilize within the context of fruit and vegetable markets. These mobilizations highlighted severe instances of labor exploitation and irregularities, which were exacerbated by the stratification of the workforce and the multiplicity of employers.

Considering externalized workers hired in the CAAB within operators' warehouses through externalized cooperatives, interviewed workers have indeed reported significant cases of violation on the side of both operators and third parties' cooperatives, particularly on the issue of security.

> "Inside the CAAB, theres' no security or anything like that. There's a lot of illegal stuff that goes on there. In the subcontracted work especially, there are many people that work without a contract, without a residence permit, without the needed licences, and without the necessary safety and protection disposal. I've even reported this to the labour inspectorate, but they've never come to check, not even once. Let's say, that the CAAB is like a desert – no oversight, nothing. You work there, and if you know the right people, you can go ahead, but otherwise, no. It's kind of peculiar, but the situation at the CAAB is way too critical. If inspectors were to happen and they saw what's going on with the subcontracting…there'd be a lot of issues. You saw yourself how it was on Friday with the carts, they were just driving around superfast, with no security devices. And then there's' what has happened to me…I was fired because last year I asked for a period of parental leave since me and my wife had a baby and he fired me. Initially the employer let me take the leave for about a month or so, but I had also asked for vacation days (ferie), but he didn't accept it and ripped

> up the paper in front of my colleagues, who were too scared to say anything. I didn't have a choice; I had to go back to my country because my father is sick, so I had no option but to ask for parental leave. I finished my leave, and three days later I was fired. From that moment, we started organizing strikes, and we're still doing them. There were eight of us in the union before, but now only three of us remain".

(Interview to a Tunisian externalized workers employed in CAAB's operators' warehouses, Bologna March 27, 2023).

In 2022, workers employed by porterage and logistics cooperative at the CAAB, unionized under grassroot union SiCobas, and embarked on a period of mobilization that has culminated in four days of strike action and multiple blockades of the market's entrance. These protests were driven by grievances over contractual irregularities, inadequate safety measures and recurring delays in wage payments – issues particularly prevalent within one of the cooperatives managing porterage activities at the warehouses. Fieldwork conducted at the CAAB during this period, has therefore included the participation in a one-day mobilization and strike, which has provided valuable insights into the fragmentation that characterizes labor relations within the market's structure. It has also shed light on the strategies employed both by workers and cooperatives. Workers have endeavored to enhance working conditions, frequently receiving support from grassroots unions that focus on organizing migrant laborers. In contrast, cooperatives have sought to exert greater control over their workforce. To this extent, one of the primary strategies adopted by cooperatives in response to these protests has been the threat of dismissal or the actual dismissal of unionized porters, particularly of those unionized with grassroots unions such as SiCobas.

> "That manager particularly hates the union, he's really against it. He wants to kick out all the workers that are union members. Once he even threatened me to death, likely there was another colleague present, so I reported him. He threatens all the workers, and usually they are afraid, because they have a family"

(Interview to a Tunisian externalized workers employed in CAAB's operators' warehouses, Bologna March 27, 2023).

From this perspective, there has been a noticeable deterioration in social and labor relations, accompanied by significant segmentation of the workforce, often linked to workers' affiliations

with specific unions. The strikes and blockades organized by SiCobas and its members throughout 2022 prompted a particularly severe response from the CAAB management, as well as from producer organizations operating within its structure and from ConfCommercio. This pressure has ultimately led to the establishment of a negotiation table convened by the Prefettura of Bologna, aimed at mediating the conflict and preventing further strike actions[82]. To this extent, as Piro and Sacchetto (2020) highlight, trade union strategies differ primarily based on how unions interpret the increasing fragmentation of the workforce and the systematic externalization of segments of the labor process. Within this context, particularly in the fruit and vegetable markets where the research was conducted – specifically at the CAAB – two predominant approaches to interpreting this fragmentation emerge. The first approach, characteristic of grassroot unions such as SiCobas, openly opposes to the system of subcontracting. In this case, the union not only organizes mobilizations in response to what are perceived as unfair dismissals, but also directly challenges the practice of outsourcing itself. Conversely, confederated unions tend to adopt more moderate approaches, partially acknowledging the potential benefits of outsourcing while striving to ensure compliance with national collective agreements. To this end, by late 2024, confederate unions such as CGIL, CISL and UIL, in collaboration with CAAB's management and the Bologna municipality, initiated efforts to establish a site-specific protocol for the CAAB. This protocol aims to develop "adequate tools tailored to ensure regular and safe work within the CAAB, with subcontracting operators guided by legality and transparency, and the monitoring of activities entrusted to contractors and subcontractors, with the goal of ensuring job continuity, legality and combating irregular forms of labor exploitation" (Protocollo di sito CAAB di Bologna, 2024). One of the most significant elements of this protocol is the introduction of a social clause that mandates companies operating under contracts or subcontracts to ensure that, in the case of independently stipulated contracts with new cooperatives, the workforce previously employed by the contracting company is maintained. This measure aims to maintain employment levels and uphold or improve existing economic and contractual conditions throughout the duration of the service[83]. While the

[82] Journal article from Federica Orlandi, Il resto del Carlino. Bologna, 15 novembre 2022. Available on the website of ConfCommercio: https://ascom.bo.it/2022/11/15/caab-protesta-si-cobas/ (accessed on December 1st, 2024).

[83] Furthermore, the protocol stipulates that the parties shall endeavor to promote the coordination of the RLSs of all the site's activities. Additionally, the possibility of the RLSs appointing one of their coordinators who can assume the role of representative of the category to promote prevention and protection activities for workers shall be considered. The three-year Protocol approved in March 2024, is aligned with the framework of the principles defined by the Emilia-Romagna *Patto per il lavoro e per il clima*, as well as the *Patto metropolitan per il lavoro e lo sviluppo*

findings and testimonies gathered in this study do not allow for definitive conclusions, they are consistent with previous research examining the diversity of trade union strategies regarding labour outsourcing within specific segments of supply chains and production processes (Piro and Sacchetto, 2020; Bubbico and Di Nunzio, 2023). In particular, the findings demonstrate the challenges that trade unions face in contesting workforce segmentation and labour fragmentation. These dynamics have direct implications for the feasibility of mobilization efforts and the choice of the most effective and preferred union strategies.

In this context, the approach adopted by grassroot unions within the Padua market is positioned in between the two previously described strategies and tends to favor a more mediating and long-term strategy, particularly when addressing cases of extreme exploitation. Indeed, during the period of fieldwork, a case of *caporalato* was documented wihin the Padua market, involving several workers who were outsourced through one of the third-party cooperatives supplying porters to warehouse operators within the MAAP.

> "Last December, a worker that was employed in the activities of sorting products for a wholesaler at the MAAP shared with us his working conditions. He explained that he was forced to pay cartain people who had helped him secure the job, despite already being poorly paid. He eventually reached out to us because he is the brother of one of our members employed at another logistics warehouse in Padua, where we had previously dismantled a system of illegal recruitment (caporalato) through ADL's efforts. Through this connection, we discovered that these workers had to pay to get their jobs. Some even arrived at the workplace after paying a recruiter, knowing they would have to pay € 2.500 to be hired, € 2.500 more to convert their contracts from temporary to permanent, and an additional €200 per month as a securing fee. These workers earned about € 1.100 per month net, plus some undeclared cash payments that varied depending on the month. However, they were working and extraordinary number of hours – between 280 and 300 hours per month – sorting products. They were employed by three cooperatives that were part of a consortium. From the initial worker who approached us, we eventually reached others. After that first meeting, we suggested he ask his coworkers if they were willing to come forwards and share their experiences. Some of them started trusting us and came to tell their stories. At that point, we decided to strategize and think about how

sostenibile. These principles are consistent with the *Carta metropolitana per la Logistica Etica* approved in January 2022 and the *Protocollo d'intesa sulla legalità*.

to address this case, recognizing it as a significant example of caporalato and severe labour exploitation. What made this situation even more concerning was that it has occurred within a publicly controlled market. Over 50% of MAAP is indeed publicly owned, with approximately 38% belonging to the municipality, 12% to the Chamber of Commerce of Padua, and the remaining 50% to the wholesalers' association. Therefore, we had two options. We could have immediately adopted a hardline, a traditional union approach with protests, picketing, and filing complaints, relying on workers' testimonies. However, we know that this strategy doesn't always work. We have dealt with many cases of caporalato, and when such practices occur in unregulated settings – essentially in the informal economy, it becomes difficult to prove and substantiate claims. As a result, we decided to take a different approach. Together with the then-president of MAAP – who had previously worked with us to resolve another labor dispute and who, being aligned with the center-left government, had a more progressive outlook compared to someone from a right-wing background – we established contact with the Guardia di Finanza. They initiated an investigation, which is still ongoing. By late October, after gathering sufficient evidence and recognizing that the workers could no longer endure the control of the recruiter (caporale), we decided it was time to act. Our collaboration with the Guardia di Finanza allowed us to collect further evidence, particularly concerning the economic actors we wanted to involve. Our findings proved accurate and shortly after, the Guardia di Finanza, acting under the prosecutor's mandate, intervened, leading to the arrest of two recruiters: one immediately and the other shortly afterward. Precautionary measures were also issued against one of the cooperative managers. The workers, in addition to paying the recruiters and enduring their exploitative system within MAAP, received completely irregular paychecks. These paychecks were calculated using obscure methods – likely multiplying hours worked by a rate we could never determine – resulting in inconsistent amounts. The listed items on their paychecks were completely irregular, and they were employed under the lowest level of the cleaning and multiservice sector contract. These workers, all originally from Bangladesh, faced additional challenges. Many spoke little or no Italian, and some were living in apartments either owned or rented out by one of the recruiters, also of Bangladeshi origin. The second recruiter, on the other hand, was Romanian. Following the complaints, the situation gained significant media attention, causing a stir given the context in which it occurred – a publicly controlled market. The case has therefore highlighted the lack of effective oversight at MAAP, both in terms of economic activities and compliance with labor, environmental and general regulatory standards. This negligence was already

> fairly well-known, but our intervention and the subsequent public exposure brought the issue to light in a way that could no longer be ignored".
>
> (Interview with grassroots trade unionist who followed some workers' struggles in the warehouse of Padua. Padua, December 13, 2023)

The increasing fragmentation of labor and the emergence of increasingly flexible and precarious economies within the logistics sector have compelled trade unions to reevaluate their intervention strategies. This reevaluation entails revisiting both organizational and conflict practices, as well as the substantive content of negotiations. A deterioration in social and labor relations is evident, accompanied by significant segmentation within the workforce, often linked to workers' affiliations with specific trade union groups. In the agro-industrial context—whether organic or conventional—the strategies adopted by both companies and workers to address challenges in labor organization and processes vary significantly depending on the stage of the supply chain. Nonetheless, these strategies consistently reflect a shared logic: fragmentation on the part of employers, and flexibility on the part of workers. Despite their contrasting approaches, both parties navigate these dynamics with similar objectives. Throughout the entire value chain—from production and initial processing phases to logistics—a complex and fragmented network of relationships emerges. These relationships involve various actors, including cooperatives, intermediaries (both formal and informal) and certification bodies, with varying degrees of outsourcing applied to a range of services such as processing, packaging, and the management of porterage and logistics services within markets. Concurrently, Di Nunzio et al. (2014) emphasize that this process is accompanied by an increasing fragmentation in prevention mechanisms, particularly regarding occupational safety. This highlights the urgent need for trade unions to initiate processes aimed at reconstructing systems of protection, representation, and participation for workers to ensure these systems are more comprehensive, cohesive, and inclusive. However, this reconstruction, should not be limited to prevention systems alone. As Bubbico and Di Nunzio (2023) suggest, it should also encompass the organizational strategies of union action, seeking to establish expansive and inclusive networks of representation and protection. These networks should facilitate connections among workers and their representatives across diverse and fragmented work and production contexts. This effort aims to address multiple layers of internal fragmentation, ranging from the subjective composition of the workforce (e.g., migrant and Italian

workers) to the multiplicity of intermediaries, contractual arrangements, and operating companies within the same workspace. Overcoming these layers of fragmentation is essential to fostering a more unified and equitable system of labor relations.

Conclusions

Having discussed the primary aspects of labor processes and organizational dynamics identified in this research, it is essential to recognize that these findings are profoundly shaped by the specific context in which the study and fieldwork were conducted. As outlined in the preceding chapter, particularly within the Ragusa province, analyzing labor dynamics and organizational structures in one of Italy's most significant agri-food enclaves entails unique challenges. These challenges arise from deeply ingrained local logics and characteristics that shape and predetermine the relationships between workers and employers. This does not imply a deterministic framework that reduces the analysis to inevitability, despite such perspectives being a recurring sentiment among respondents. Instead, it emphasizes the need for a nuanced approach to comprehend the mechanisms and opportunities for change within an agricultural enclave such as the Transformed Littoral Strip.

Such an approach facilitates the exploration of the multilayered dynamics shaping labor relations, the evolution of labor processes, and the distinctive experiences of restructuring within the agri-food sector. Rather than representing an isolated example of the marginalization and exploitation of migrant farmworkers, the analysis of agricultural labor in this context highlights how intersecting factors amplify workforce fragmentation and stratification. These factors include the significant presence of migrant farmworkers from diverse national backgrounds, minimal oversight by public authorities, the critical role of third-sector organizations in providing essential services, and an agricultural economy that employs nearly the entire local labor force. Within this framework, both formal and informal intermediaries play a central role, perpetuating the stratified and fragmented nature of labor.

The contradictions and tensions stemming from the agri-food sector's restructuring are particularly visible when assessed alongside other levels of the supply chain. This emphasizes the importance of examining how local labor conditions interconnect with broader systemic transformations in the sector. Furthermore, while evaluating the extent to which various

components of the green transition—such as organic and quality certifications or the green restructuring of wholesale markets funded by PNRR initiatives—have influenced labor conditions, it is crucial to acknowledge the research's focus on industrial farming and agri-food supply chains. Within this scope, three primary macro-dimensions of work emerge as shaped by heightened interest in sustainability and the broader restructuring of agri-food value chains: the levels of intermediation, the segmentation of processes and procedures, the resulting increase in workload, and the forms of workers' organization and mobilization.

Drawing on Piro's (2022) conceptualization and the analysis presented in the preceding chapter, this section provides additional evidence reinforcing the infrastructural nature of intermediation within the agri-food sector. By examining how intermediaries shape relationships across different segments and levels of the supply chain, the chapter highlights the pervasive influence of intermediation, which not only operates at a meso-level but also profoundly affects worker-employer relations. Instances of formal and informal, legal and illegal intermediations reveal how this infrastructural dimension shapes and perpetuates power relations across various levels. The growth of the organic market, which has drawn attention to sustainability measures, is embedded within a broader value chain logic oriented primarily towards capital accumulation rather than improving labor conditions along the supply chain.

Organic certifications and supermarket standards, for example, establish specific guidelines for product processing, selection, and treatment of plants and animals but pay minimal attention to farmworkers' labor conditions, both within and outside the workplace. Instead, these certifications function as private regulatory mechanisms with an intermediary nature that bureaucratizes production processes in increasingly neoliberal directions (Loconto, 2017; de Castro Pericacho et al., 2021). Their primary objective is to ensure cheap and flexible labor for a just-in-time market. Consequently, in production markets, intermediation often involves worker recruitment through illegal mechanisms such as *caporalato*, or via familial and compatriot networks, while in warehouses, intermediation shapes labor relations through the increasing role of cooperatives and externalized agencies.

As outlined in the previous chapter, meso-level intermediations often aim to reduce costs, increase control for retailers, and standardize processes to deliver cheap, interchangeable products to consumers. Similarly, intermediation at the micro-level intensifies control over the workforce. This control manifests in structured forms, such as private cooperatives that fragment levels of

oversight, transferring risks, responsibilities, costs, and uncertainties to multiple parties. Such fragmentation complicates workers' ability to organize and address grievances to those directly responsible. In other instances, intermediation exploits gendered and racialized roles, fostering isolation and marginalization.

From the workers' perspective, the cumulative effect of these intermediation layers is increased difficulty in collective organization due to the vertical disintegration of companies, reliance on externalized agencies, and subsequent work fragmentation. Although trade unions have occasionally mitigated these challenges—such as through Germany's legal ban on externalization in the meat processing sector—the strategies employed to address cooperative and agency-driven intermediation, combined with workforce segmentation, pose significant barriers to collective action. Conversely, at both production and distribution levels, this chapter highlights how mobility and turnover have emerged as key strategies, particularly among migrant workers, not only on an individual level but as collective adaptive responses.

Considering the direct effects of organic practices on labor processes, this analysis reveals how activity diversification and channel multiplication have increased workloads, with differentiated impacts depending on farm type and capacity to invest in technological innovations. While certification systems and regulations influence relationships across the supply chain, rather than dismantling existing power relations or hierarchies, these mechanisms may inadvertently exacerbate inequalities along the agri-food value chain. By amplifying control mechanisms targeting the most vulnerable supply chain segments, organic and sustainable certifications risk perpetuating inequities within the sector.

Finally, the comparison of the strategies and the forms of resistance adopted by migrant workers against poor working conditions at different levels of the supply chain, has revealed various elements of continuity, although the contexts and dynamics shaping the forms of labour conflicts are different. While on the production side, in the Ragusa area, mobility, turnover and forms of implicit and hidden resistance are the most common strategies adopted by migrant workers, trade unions and collective organization play a more relevant role in the context of wholesale markets and logistic platforms. In this respect, in order to better understand how these different forms of organization and mobility take place, it is also necessary to focus on their links with the different forms of social reproduction that shape the everyday lives of migrant workers in the different contexts studied.

Chapter 7. Reproducing lives: the complexities of work, housing and social networks among migrant workers

Introduction

"*Vittoria, a city in the province of Ragusa, has become the setting for an ethnography over the everyday, or more precisely of the daily construction of a labor system that, due to its characteristics, has inevitably evolved into a system of life" (Sanò, 2018:8).* With this description, drawn from her ethnographic research on agricultural workers employed in greenhouses of Ragusa, Giuliana Sanò highlights the intricate connection between the productive and reproductive dimensions of workers' lives in the Transformed Littoral Strip, illustrating how precarious employment conditions inevitably extend into precariousness in housing, social relationship, and broader life circumstances. This chapter seeks to explore the dynamics of social reproduction, examining how they intersect with contextual, environmental and ecological factors. The aim is to reveal how labor processes and working conditions shape the lives of migrant workers employed withing the fields and packaging warehouses of the Province of Ragusa, and within the fruit and vegetable markets of Bologna and Padua. Drawing on the theoretical framework outlined by Baglioni et al. (2022) and discusses in Chapter 3 (Table 3), this chapter integrates perspectives coming from feminist scholars to examine the differentiated ways through which workers reproduce their lives. In particular, this section moves around three main questions:

- Who reproduces the worker? Where? And how?
- What reproductive costs are assumed by workers, or the State and/or the employers?
- How is the reproduction of differences (between classes, gender and races) affected by different institutions?

Such perspective allows to emphasize and consider the ways in which class oppression is mediated through intersecting axes of gender and race (Mezzadri, 2016). This approach also highlights how forms of exploitation permeates both waged and unwaged labor within the realm of social reproduction (Ibid). The exploration of social reproduction not only provides insights into mobility patterns, but also unveils the tensions and forms of resistance embedded within labor relations (Alberti and Sacchetto:119). To this extent, several scholars (Ibid; Mezzadri, 2021; Bakker and Gill, 2019) reject the opposition between production and reproduction, emphasizing instead their mutual constitution as spaces where forms of resistance and agency are shaped, take

place and can grow from one place to another. Moreover, as Anderson (2010) underscores how differentiated migratory processes produce precarious workers destinated to different segments of the labour market, Bakker and Gill (2019) refer to *variegated social reproduction* to highlight the historical and cultural variability of social reproduction, that shape reproduction processes under contemporary capitalism, stemming from social, cultural and ecological practices and structures.

Building on these assumptions, the chapter therefore examines the mechanisms through which workers are reproduced – focusing on the role of migratory processes, migratory infrastructures (Xiang, Lundquist, 2014), and the resulting social networks and family structures. These elements, in turn, influence the conditions under which laborers sustain themselves and their families, making necessary to consider both the more domestic and private sphere, but also the role played by public institution and regulatory frameworks, and the involvement of NGOs and local associations. In the Transformed Littoral Strip, for example, migrant workers face extreme isolation, often living in conditions shaped by what Piro and Peruzzi (2024) describe as an "emerging camp labour regime". Here, roles of employers, reception centers, and local organizations become critical in providing access to essential services and mitigating the harsh realities of life and work. Therefore, the chapter continues by presenting how the conditions of isolation and marginality experienced by migrant workers contribute to the construction of a discriminatory workfare state (Alberti and Sacchetto, 2024). In line with feminist scholarship that broadens the scope of social reproduction beyond domestic and care work, encompassing activities that are vital for the maintenance of social relations, access to healthcare and daily sustenance, the chapter therefore refers to social reproduction in a broader sense to include all the activities that form the foundation of life-making processes and reflect the structural inequalities underpinning precariousness and exploitation beyond the workplace. The interplay between social networks, fragmented labor processes and stratified working conditions shapes diverse forms of resistance and agency, both at the individual and collective level, which this chapter will explore.

The first section analyzed housing and living conditions of migrant workers, highlighting how varying degrees of isolation and marginalization, are enforced through control mechanisms exerted by landlords, employers, intermediaries and social workers. These mechanisms, in turn, influence workers' strategies of resistance.

The second section addresses the reliance on formal and informal intermediaries to access essential services such as transportation, education, healthcare and legal documentation. This

reliance reflects ongoing negotiations between migrant needs and the institutional or mediated responses available to them. On this terrain, particular attention is given to the emancipatory projects of migrant women, which navigate patriarchal structures within their families and discriminatory stigmas rooted in their nationalities.

The third section shifts the focus to the ecological and environmental dimension of social reproduction. It emphasizes how industrialized agricultural production disproportionately exposes low-income, racialized, and migrant communities to environmental degradation and health hazards. These "sacrifice zones", as defined by Lerner (2010), foster a "structural vulnerability" (Holmes, 2014) that racializes access to health and sanitation under exclusionary and discriminatory logics.

Finally, the chapter moves to the experience of migrant workers in fruit and vegetable markets, with a particular focus on night-shift labor in warehouse settings. The analysis considers how the nocturnal rhythms of labor exacerbate precarious living conditions, further entrenching marginalization while also giving rise to unique forms of solidarity and resistance.

Considering the focus of this work, it is important to note that these transformations within the organization of the global agri-food supply chain also pertain to the Corporate Environmental Food Regime (Friedmann, 2005) and the way the organic farming supply chain is structured. Chapter 5 analyzed how logistics, initially an internal process within the supply chain, has expanded to become an almost independent sector. It examined how, at the macro level, the agri-food supply chain has been reorganized due to the increasing role of independent platforms and logistical hubs within specific distribution chains. This reorganization has led to internal adjustments in the supply chain concerning the actors involved and those who have entered the scene following the progressive standardization of production processes – predominantly linked to the growing influence of certification bodies. Additionally, this reconfiguration of the supply chain has resulted in a restructuring of labour within it. Chapter 6 discusses how this reorganization has primarily aimed to meet a market demand increasingly focused on ensuring fresh products, high availability and enhanced quality. The following sections demonstrate that this transformation and industrialization of production have not only altered work and production processes but have also reshaped the contexts in which reproductive activities occur and how the daily lives of the actors involved in the supply chain are organized.

1. Living in the countryside of the Transformed Littoral Strip: housing isolation, marginality and caporalato service

Within the context of the industrial restructuring of agricultural areas such as the Transformed Littoral Strip, the establishment of a production model reliant on a flexible and low-cost workforce has driven significant migration flow, profoundly altering the territory and its landscape. As highlighted in the previous chapters, these transformations impact both the organic agriculture sector and the conventional agriculture sector quite indiscriminately, particularly in an agricultural context such as that of the province of Ragusa. Here, the continuity and proximity between farms complicate the distinction between the environmental and social consequences of one agricultural approach versus another. Moreover, the marginality and geographic isolation significantly influence the living conditions and reproduction of the lives of all workers, particularly those who are migrants. This therefore delves into how marginalization affects the living and housing conditions of migrants employed within the Transformed Littoral Strip.

In peripheral and administratively fragile contexts – where economic power tied to the productive system often overshadows political and administrative authority, and resources are scarce – Lo Piccolo and Todaro (2018:293) observe the emergence of a *state of exception* which would give rise to what they describe as an *exceptional case*. Within this framework, the landscape of Ragusa's greenhouses has replaced the dunes that once reached the sea. This landscape transformations have come together with a social transformation that has been described by Corrado (2012) as a *differentiated rurality*, characterized by new economic and social relations often marked by precarious and emergency housing conditions for migrants working in greenhouses and local warehouses. These housing conditions, primarily characterized by an extreme spatial segregation, deeply influence also the social and reproductive lives of workers.

According to Brovia and Piro (2021), four main factors significantly shape labor market structures in the agricultural sector: the organization of production (whether seasonal or non-seasonal), migration policies that produce distinguished legal statuses, labor market regulations and recruitment processes, and the mobility strategies devised by migrants. The interplay of these factors doesn't only determine workers' living conditions, but it also underscores the profound link between productive and domestic spheres – both of which are critical in shaping the labor market. Research on agricultural workers has in fact consistently shown that housing conditions

near industrial agricultural enclaves are often characterized by isolation, marginalization, and a lack of essential services. While certain continuities can be identified across various Mediterranean agricultural contexts, there are significant differences shaped by the specificities of the four dimensions mentioned above, which are, in turn, influenced by power relations that create specific and racialized housing regimes (Clapham, 2018; Ruonavaara, 2020; Sanò, 2024). To this extent, Perrotta (2023)[84] identifies two main types of settlements for agricultural workers in Southern Italy: large informal settlements, typical of seasonal production areas (e.g., Foggia, Cassibile, Piana di Gioai Tauro), and individual or family housing, generally reserved to long-term workers, as in the case of migrant workers employed in the Transformed Littoral Strip. Another key distinction lies in the mode of access to housing, which, in most cases, involves intermediaries – whether formal or informal – depending on the worker's legal status. Based on the schematization defined by Perrotta (2023), the following Table 11 resumes some of the main characteristics of migrant farmworkers accommodations that can be found in the Transformed Littoral Strip, particularly considering the main differentiations between workers, the different intermediaries that come into play, the relationship with employers and workplaces and the forms of control that are reproduced. In the context of Ragusa, housing models predominantly align with individual or family structures, while the only large-scale settlements are those managed by reception facilities for refugees or asylum seekers, often located near small urban centers in the region. Perrotta (2023) identifies two primary housing models for individual and family arrangements: one in which a separation exists between work and home, and those where workers live within the farms where they are employed. As Perrotta (Ibid) notes, the separation between home and work often implies a "mature" migration trajectory, where workers have had the opportunity to settle in the area, obtain residence permits over time, and plan for long-term settlement.

Table 8. Types of accommodations for migrant workers in the Transformed Littoral Strip

	Type A	**Type B**	**Type C**
	Local administration-led or state led-accomodation	**Work-home separation**	**Workers and their families living in their farms**

[84] This contribution has been part of the workshop "Social Reproduction of labour. The place of accommodation and migration" organized at the University of Padova on the 26th and 27th of October 2023. In this occasion Domenico Perrotta held a presentation titles *"Labour Social Reproduction in Italian Agr-food Systems: a comparative overview"*.

Who	Extraordinary Reception Centers (CAS) + Reception and Integration Centers (SAI)	Especially migrant workers who do not own directly the farms (the owners prefer to live next to the fields)	Especially workers who rent lands and own their own business (A) + workers whose employer and landlords coincide (B)
Theoretical references	Camp labour regimes (Piro, Peruzzi, 2024)	Ghettos, camps and dormitories (Brovia, Prio, 2020)	Overlapping of production and reproduction spaces (Pun and Smith, 2006)
Migratory process	Asylum seekers and refugees (early arrived extra-EU migrants, mostly from sub-saharian African countries, Bangladesh and Pakistan	Mature migration trajectories, often workers having long-term residence permit	Mature migration trajectories (A) + more recent arrivals (B)
Costs	No reproductive costs + pocket money (75 euros per month when not working)		Often accommodation is "for free" but wages are lower and include indirectly the costs of the rent (B)
Forms of intermediations	Social workers act as intermediaries for finding jobs	Role of intermediaries (informal arrangements and residence contract) + caporalato of services	Role of intermediaries (informal arrangements and residence contract) + caporalato of services
Limits and constraints	Constraints on the entrance/exit hours (challenges when doing nightshifts) + tension and frustration due to long period of attention from migration authorities	Isolation and lack of transports	Isolation and lack of transport + extra jobs (e.g., controlling the fields) (B)
Forms of control	Control on paychecks, risk of being expelled from reception centers when their revenue is higher than the Italian social allowance (6,000 euro)	Control of family members	Control of landlords /employer double control of family (especially for women and children) and employer
Work	Working as soon as possible + creation of "informal markets" aimed at selling information and documents		Working for the landlord

(Elaboration of the author based on Perrotta, 2023)

From this perspective, as previously discussed, temporal differences in migration experiences, along with the stratifications produced by migration policies, play a central role in exacerbating disparities and polarization among the various national groups present, as stressed by Anna Cortese and Rita Palidda (2018; 2020). However, according to Piro (2022:88), this interpretation risks to omit at least two main aspects. Indeed, while recognizing the distinctions – particularly between the two most important national groups of Romanian and Tunisians – this perspective might

underestimate the central role played also by employers which often goes beyond labour relations. From this perspective the role of migrant autonomous network must be considered as part of that migration infrastructure identified by Xiang and Lindquist (2014) that shapes the trajectory of migrant movements and plays a relevant role in shaping labour and living experiences. Often, employers' influence significantly impacts on workers' housing conditions, particularly in cases where employers act as intermediaries or directly provide housing solutions to their employees (Table 11, type C). To this extent, it particularly contributes to the debate the concept of Camp Labour Regime (CLR) elaborated by Piro and Peruzzi (2024) to refer to the set of social relations and institutions that contribute to make accommodation – often in the form of refugee camps – as a fundamental element within the organization of production, particularly in relation to the localization, capturing and reproduction of a precarious migrant workforce that serves the needs of local labour markets. Referring to the context of the Transformed Littoral Strip, it is therefore possible to find these elements, and refer to the categorization of Domenico Perrotta (2023) when analyzing the different housing solutions found by migrant workers. To this extent, within the Province of Ragusa it is possible to find mostly three possible solutions.

- Type A: Local administration-led or State-led accommodation. This category pertains primary to asylum seekers and refugees hosted within reception facilities which in the context of the Ragusa Province are mostly located within or next to urban centers, as in Vittoria and in Acate.
- Type B: Work-home separation. This typology primarily characterizes the migratory experiences of Tunisian workers. In these cases, workers have often accumulated sufficient savings to independently secure apartments or housing without relying on intermediaries. These dwelling are generally located near main urban areas, however, in many instances – even when workers manage small agricultural farms – they continue to reside near the countryside to maintain constant oversight of their land.
- Type C: Workers and their families living in the farms. This category mostly includes workers who enter into agreements with employers to rent accommodations in structures within rural areas. In such cases, the employers' control extends beyond the productive sphere into the daily life of the workers. As stressed by Piro and Peruzzi (2024), these processes of workforce concentration and the compression of the time and cost of daily

reproduction are very well illustrated by a wide stream of literature discussing migrant accommodation in dormitories across the world, leading several authors to describe this as a *dormitory labour system* (Andrijasevic, 2022; Ceccagno and Sacchetto, 2020; Smith, 2003)[85].

1.1. Living in "camp labour regimes" in agricultural enclaves

Workers living within reception centers (Type A), are predominantly asylum seekers from Sub-Saharan African countries, Bangladesh and Pakistan that are usually hosted in Extraordinary Reception Centers (CAS) and facilities that are part of the Reception and Integration Centers (SAI) for often extended periods[86]. Although the activity and participation in the labour market of asylum seekers housed in SAIs and CASs is limited by law and must not exceed the amount of the annual social allowance (of EUR 6,000 per year), many migrants housed in these facilities generally prefer to start working in order to put money aside and send money to their families from the first days. Therefore, many find irregular employment or are hired through *grey contracts,* particularly in local greenhouses or warehouses, to start working and earn moneys since the very beginning of their migratory path. As mentioned in Chapter 5, the integration of migrant workers living in reception centers into the local economy is often mediated by social workers who actively engage with companies to favour the recruitment of asylum seekers and refugees within local companies, striving to negotiate informal agreements with employers capable of ensuring a minimum standard of fair working conditions. The pivotal role of social workers in favoring the match between labour demand and supply has also been confirmed by Peruzzi and Piro (2024) who stressed how they often perceive their role as crucial intermediaries between newcomers and labour market. Therefore, to some extent, living within reception centers is often perceived as one of the "best"

[85] Perrotta (2023) also alludes to an alternative form of housing that is facilitated through the intermediation of civil society, namely actors who provide support to migrant workers in their search for rental properties. In this regard, one of the objectives of the projects coordinated by the Praesidium Caritas in Marina di Acate is to match owners of vacant properties with migrant workers seeking housing, with a view to facilitating the housing integration of agricultural labourers.

[86] As stressed by Piro and Peruzzi (2024), recent Italian regulations (Law n.132/2018 and Decree n.20/2023 – have limited access to the SAI to minors and refugees with a residence permit. To this extent, all asylum seekers, as well as those who have received an initial rejection of their claim, are now only entitled to access the large emergy centers (CAS). Moreover, as the same regulations have provided also a significant budget reduction for the facilities, they have resulted in the progressive centralization of the reception system and the concentration of refugees in fewer and larger structures.

options for migrant workers, as within CASs and SAIs at least they can live free of charge, while the alternatives, especially at the very beginning, often high economic costs, exposing also many migrant workers to the requests and extortions of intermediaries who propose them precarious and illegal solutions as occupying informal buildings or living in crowded and expensive flats. During the period of fieldwork, one of the first farmworkers I have met at the Marina di Acate Praesidium was a Senegalese worker that had recently received a letter of convocation from the Court as a few months earlier he was found by public authorities living together with many other migrant workers in an informal apartment in Acate.

> "I lived there for a few months because this guy I thought that was a friend of mine told me that I could live there and have my residence permit there as I need to put it somewhere. So, I thought that it was fine, that everything was ok. I was living in this house that was very crowded, there were many of us, mostly from Senegal and Mali. But one day the police arrived, and they kicked us out. I found out I had no residence permit there, although I paid for having both the house and also the residence permit. But nothing. Now I'm living nearby next to the greenhouses"
>
> (Fieldnotes, Marina di Acate, June 2, 2023).

On the other hand, living within reception centers is not always compatible with the needs of farmworkers, also considering the working hours of farmworkers who, especially during the summer start the shift very early in the morning or even work on nightshift in order to avoid the heat.

> "When I was staying at padre Beniamino, the problem was the fence. Because often when I was coming back from work, during the night, they were not opening the fence. […] Moreover, if you were working while being hosted within the reception center, he (padre Beniamino) would kick you out because you are not supposed to have money. But when I arrived also with the others that were staying there, we agreed that there was no other option, we had to work because we didn't have any money. Because even if the reception centers give you 75 euros per month with the pocket money, we still need to work because it is not enough. So, we agreed together to go and start looking for a job, and actually I started working quite soon".

(Interview with Senegalese agricultural worker, Vittoria, 5 July, 2023)

One critical aspect emerging from the study of the relationship between reception centers and refugees' working conditions, has to do with the limits that are set on their incomes, for having access to housing within reception centers. According to Italian regulations (Law n. 142/2015), the income of asylum seekers and refugees hosted within reception centers must be lower than the amount of the Italian social allowance which is of €6,000 per year. The legislation requires that where the annual total of salaries exceeds the social allowance, the migrants' right to be hosted within SAIs and CAS expires. Therefore, among the refugees housed within reception centers, many prefer to work without a contract or partially under grey conditions so that their real salary is not recorded or visible to social workers, especially it exceeds the €6,000 limit of the social allowance. This also explains why, fearing the expulsion from reception structures, social workers operating within the CAS, report refugees reluctancy to show them their paychecks or share any information concerning their work.

> "Often if I ask them to show me their paycheck they don't want to. I usually ask them this just to monitor the general a bit, to see if there are companies that pay better than others. But they won't show it to me. Also, because now we (reception facilities) have the rule that if you exceed 6000 euro, you are not entitled to part of the pocket money. If you exceed 6000 per year, which is the equivalent of the poverty line (soglia di povertà) according to INPS, you don't have the right to reception and are therefore expelled"

(Social worker of the Casa Valdese in Vittoria, July 25, 2023, Vittoria)

As stressed by Piro and Peruzzi (2024), given the long-period of time that refugees and asylum seekers need to wait to obtain any response from local authorities, which often blocks migrants within reception centers for several months and sometimes even years, refugees who spend a longer period in the reception centers often served as intermediaries not only for finding a job, but also for accessing to practices and documents that are needed for the asylum requests or the other bureaucratic procedures linked to their migrant status. According to another social worker, in many cases, the length of the wait is due to the lack of information among asylum seekers and refugees, but also to the late answers from the local Commissions in charge of assessing asylum claims or

requests for international protection. These delays, and therefore the long periods of stay in the centers, often result in strong tensions among migrants and social workers employed in reception centers.

> "At the beginning, when they arrive, they are glad they made it. They are happy to be in Italy. The first thing that social workers tell them is that they have to wait, that they must be very patient. Often, they need to wait months just for the fingerprint's appointment. And during all that time, during the long months of wait, they shouldn't do anything but wait. They shouldn't work. They remain stuck in this limbo where they should not do anything, they should not work. They remain stuck in this limb that has very material effects on them. When operators tell them that there has been a delay with the Commission, or that the judge has delated a meeting, they often get angry with us, but we are just intermediaries who communicate to them information. But this nervousness, this endless wait, accompany all the stages. From the collection of fingerprints to the release of the sanitary card, to the appointments with the Commission for the asylum requests. They often have to make long useless trips between municipal offices, the prefecture, the police station, just to get the necessary documents. Indeed, this has led to a kind of "document dispatch cycle" and some people just go, make a tour of the offices, take more papers than they really need and then sell them on to the others".
>
> (Interview to social worker operating at the Casa Valdese di Vittoria, May 20, 2023).

Therefore, while hindering migrants' possibility to enact their mobility power, and keeping them within this long period of limbo, the long-term permanence of migrants within reception centers, also leaves space for the production and reproduction of subjectivities that allow refugees to deploy and define their own strategies and agency, leading them to define their own rules that shape the permanence within reception centers[87].

Therefore, aligning with the results collected by Piro and Peruzzi, interviews conducted during the fieldwork in the Province of Ragusa show also how both public authorities, through migration and labour policies shape a framework where companies and farmers can easily access to cheap and

[87] To this extent, it is particularly interesting the research conducted by Turner (2015) within Syrian refugee camps in Lebanon and Jordan where he argues is not only a place shaped by the humanitarian securitization, but also a tool with which state increase the labour supply, intensifying workers' precarity and reducing wages by also strengthening class differences among refugee populations.

low-qualified labour force. In this framework, informalization – especially among refugees and asylum seekers – is constantly reproduced at different levels, within recruitment practices, and the spread of irregular and *grey* working conditions coexists with strategies that are adopted by workers to circumvent the rigid reception centers' regulations.

1.2. Living next to the workplace

Concerning the workers living in the countryside next to the farms, several authors have emphasized how the landscapes of the Transformed Littoral Strip have been redefined by the presence of internal and international migrants both from a social and environmental perspective (Corrado, 2012; Piro, 2020; Lo Piccolo and Todaro, 2018). Within the academic debate that has focused on migrant labour in agriculture, several contributions have analyzed the relation between working conditions and housing conditions of farmworkers. Some scholars (Perrotta and Sacchetto, 2012; Pun and Smith, 2006) have focused on providing a spatial interpretation of this phenomenon, particularly analyzing how the overlap of production and reproduction spaces has allowed a reduction of labour costs for employers, isolating workers who live in marginalized rural areas, and favoring an increased control of their reproductive time and space (Piro and Sanò, 2017). In such context, workforce accommodation, especially concerning the role played in the organization of production, shows how the main interests of employers is to maximize their profits, by compressing the cost of work which often is linked to a general compression in the times and costs of workers' social reproduction (Andrijasevic and Sacchetto, 2017; Pun and Smith, 2007). A perspective that has allowed to include within the debate concerning agricultural labour, also reflections concerning the *hidden adobe* where labour force is continuously reproduced (Fraser, 2014)[88]. Indeed, most of the migrants working in the Transformed Littoral Strip, live in houses located within ghettos, where the space and the environment are often redefined to reflect workers' stratification and segregation (Perrotta, 2015; Semprebon et al., 2018; Brovia, Piro, 2020).

> "There's a very serious problem related to housing, because these workers are employed in farms and they often live next to the companies in what used to be

[88] Analysing the experiences of the first migrants in Italy, Ferruccio Gambino (2003:103-104) defines their experience and living dimension as 'seclusion', meaning that particular 'spatial arrangement that reinforces the reproduction of the daily life of an individual or a group in a single place, from which they are formally free to leave at certain times of the day or, more often, of the week', but in which they are in fact trapped.

> a warehouse, a garage, a tool shed or even a stable. So, let's say that the houses are not real houses, and this means that most of the workers employed here could actually be considered homeless".

(Interview to coordinator of the projects in the Marina di Acate Caritas Praesidium, June 8, 2023)

The proximity of the housing to the greenhouses and the land where they are employed on a daily basis, implies a spatial coincidence between worker and employer, but also a relational continuity, and therefore a direct and constant control over time, mobility, labour and living habits, including on relational aspects, often leading to an increase in the level of flexibility and availability constantly required to workers (Brovia, Piro, 2020). In some cases, the fact that the workers live close to the workplace also allows the employer to delegate other tasks, as in the case of this farmer who has also solved the problem of having to keep a constant check on his field by renting accommodation for his workers next to the greenhouses.

> "I have settled them (the workers) and I invested 70,000 euro and they are comfortable, they live in decent conditions…there are no hanging wires, the walls are fine, I rebuilt their houses, they have a refrigerator, washing machine and everything. And some I also solved the problem that here, in the fields, during the day I was master (padrone), but not at night. At night here, it was no man's land, there were a lot of robberies. About 10,000 euro of goods and materials were stolen considering plastic sheeting, fertilizers, other material. Since I've had workers living here there are no more thefts, because there's a continuous control since they're living here. We do the minimum effort here; we come and go for the savings. Also, for the thieves it doesn't make sense to come here…because if a thief has to choose between coming to my fields, where there are two people living here, or an uninhabited countryside, he goes where it is easier, where he has fewer chances to get caught. And so, I have solved the problem of theft. We all want to save energies. It's not about now, you always try to do like that. You choose the easy way".

(Interview to agricultural entrepreneur. Scoglitti, June 28, 2023)

The conditions of isolation and segregation are also influenced by the general lack of public transportation that significantly affects the daily access of migrant workers to a wide variety of

services, from grocery stores, to healthcare, to school and several public services, therefore leaving much more space to employers to control and shape different parts of social reproduction. To this extent, beside the living and housing conditions of farmworkers, stratifications and power relations also exist within groups of migrant workers living in the fields, that are particularly shaped by aspects such as social class of origin, the level of education, gender and length of stay and arrival. For instance, concerning farmworkers living in shared accommodations, usually, the most spatial and comfortable buildings are dedicated to the longest employed, while the most precarious ones are reserved for the latest arrivals.

> "At first, I was living in the area of Punta Secca. But I was living the fields. Because the owners of the companies where I was working were giving us also a place to stay, they had houses and rooms in the field. I was sleeping in a big room and sharing it with two or three colleagues, but only women. Then I changed company (…) I lived in the fields for a long time. For two, three, four years. Even in the place where I'm working now, I used to live in the fields at the beginning. He had greenhouses, but in the middle of the greenhouses there was a house, where they provided accommodations for farmworkers. There were many rooms and then you had a big room, which was a single kitchen where everyone had their own corner. You'd buy a cooker…I was on my own at the time, so I wasn't even interested in cooking that much. I would make two fried eggs and that was it. We had three showers, and we would take shifts for showering (…). I didn't have a driver license at that time. So, it was the owner of the company who had the van and was taking us once a week to the grocery store. He was driving like 10 people one week, 10 people the week after (…). Sometimes the boss would drive you, sometimes the foreman…then I got my driving license, after a while I bought a car, so I was driving back and forth myself. We didn't pay rent. He gave us an accommodation for free and then you were getting paid 15 euros per day"
>
> (Interview with Romanian worker, Vittoria, June 30, 2023).

In continuity with the literature that has analyzed the overlap between productive and reproductive space within dormitory regimes (Baglioni et al., 2022; Sacchetto and Andrijasevic, 2017; Goodburn and Mishra, 2023), it emerges very clearly from this interview how this spatial continuity between production and reproduction is functional to value the social reproduction of workers housed within the housing accommodations and dormitories close to the plastic factories

(Sanò, 2018; Piro, 2022). One of the characteristics of these housing systems is in fact the strong compression of the price of labor that is guaranteed by the reduction of reproduction costs, which is in turn favored above all by the spatial location of reproduction costs within the factory-dormitory complex (Piro and Sanò, 2017). In fact, according to the Romanian worker's testimony, it is the fact that the employer provides accommodation and guarantees certain essential services, such as transportation, that allows the employed to reduce labour costs and thus pay workers 15 euros per day. Moreover, in a context marked by high levels of isolation and marginalization, employers' ability to profit from these conditions is particularly pronounced. This has allowed for the emergence of various forms of intermediaries, which assign a secondary importance to the labor intermediation prevalent in other agricultural areas of Southern Italy. In those regions, where the work is primarily seasonal, more traditional forms of labor exploitation, or *caporalato,* take place. In contrast, in the context of the Transformed Littoral Strip, the destagionalization of labor and crops coincides with a significant presence of migrant laborers.

> "Clearly the distance from the places where workers usually live from the closest towns creates significant problems concerning the access to a whole range of services (school, health service, administrative offices for the renewal of residence permits and documents, shops where they can do their shopping). This also allows to move away from the traditionally understood form of caporalato, as the intermediation between employer and worker. Here, in fact, this takes a different form, than in other parts of Italy. It presents a series of intermediary figures concerning services, starting with car passages and moving towards other types of intermediations. So here for instance we have a series of unauthorized taxis, of people who help with paperwork, with people who provide fake work contracts in order to allow the renewal of residence permits, with finding places to take up residence, and so on"

(Interview to coordinator of the projects in the Marina di Acate Caritas Praesidium, June 8, 2023)

As Sanò highlights (2018:172), within the literature and the political debate focused on caporalato and on the exploitation of agricultural labour, in some cases, forms of intermediation falling under the definition of caporalato have been reduced to forms of exploitation linked exclusively to labour relations. In Chapter 6 different forms of intermediation taking place both

within organic and conventional agriculture, and along diverse supply-chain segments, have been described. Other authors (Perrotta and Raeymaekers, 2023; Perrotta, 2015) have emphasized how caporalato is not inherently linked to mafia and criminal organization based in Southern Italy, nor it necessarily entail physical violence and slavery-like practices. Rather, caporalato has represented a "central infrastructure of labour mediation which complements neoliberal state policies while embedding the cost of labour reproduction into migration networks" (Perrotta and Raeymakers, 2023:2). Indeed, despite the most common definition of the caporalato system refers to an illegal system of intermediation and exploitation of worforce by *caporali* that recruit workers, this is not a homogeneous system. It exists in various forms within the Southern Italian countryside, adopting specific characteristics according to the local territories. Therefore, mediation can be expanded beyond labour relations, and may involve various actors, while the *caporale* assumes a pivotal intermediary role. Rather than recruiting labour and organizing workers, within the context of Ragusa, the *caporale* mostly plays is intermediary role in driving workers and their families around the countryside unfurnished with public transports and therefore demanding remuneration according to the "service" provided. Following the deseasonalization and the continuity of agricultural production in the area, migrant workers are mostly long-term based. Intermediation is often the channel of access in Italy for migrants from their country of origin, overseeing the journey or providing a connection with an employer willing to regularize their entrance in Italy in a regular way (Ibid; Leogrande, 2016; Caruso, 2017).

This reflection is helpful to understand the phenomenon of caporalato beyond the parameters and the limits of conventional labour relations. If, on the one hand, caporalato is an illicit form of labour recruitment and organization that is particularly prevalent in the agricultural sector across various regions of Italy, in recent decades it has assumed characteristics that are particularly evident in the context of the significant proportion of labourers and caporals of migrant origins which reproduce on the terrain of informal intermediation parts of the migration infrastructures that rely expecially on migrants' autonomous networks (Xiang and Lindquist, 2014). Therefore, in many instances, the issue of intermediation is not solely confined to the realm of labour relations. Rather, it assumes the form of a service-based caporalato, whereby intermediaries facilitate access to various services, including entry into Italy, transportation, documentation renewal, and housing for migrant workers.

During my period of participant observation at the Presidio Caritas in Marina di Acate, the phenomenon of the so-called *caporalato service* emerged clearly in the first place in relation to the issue of transport and housing isolation.

> "While we were assisting some migrant workers in sorting clothes during the clothes distribution, a Romanian woman arrived with two little girls. The youngest may have been three years old, while the other could have been six or even 7. As soon as she entered, the woman said she was in a great hurry and asked if she could pass in front of the other men who were in the queue waiting for their turn. As soon as she enters the small room I helped her choose the size and the clothes for her and the two little girls, she quickly explains that she was in a hurry because she came by taxi and the taxi charged her 40 euro to go from her home to the school to pick up her daughter, and then to come and get the clothes at the Presidio. As soon as we finished to fill two large bags of clothes, she returned to the car with the girls and drove off. I notice a man in his sixties driving and the coordinator of the project explains me that he knows him and that he's an Italian who often gives "rides". "Sometimes they're Italians, sometimes they're not, often Tunisians" he tells me "Once it even happened that one of these illegal taxi drivers had driven a family here, whose little girl needed a doctor. Once we got here, we realized that she needed to be brought to the hospital, but the taxi driver refused to bring her there, even though they would pay him, because he said it was too far away".
>
> (Notes from the field diary, Marina di Acate, May 30, 2023)

The role of the gangmaster as a mediator is therefore determined by the needs that are generated by the local context which mediators exploit in order to make profit over the vulnerabilities, the marginalization and the exploitation of workers. To this extent, the distance between the greenhouses and the closest urban centers, and therefore the accessibility of school and health services, public offices and all kinds of commercial activities, represent for the mediator a potential source of profit, which exploits the isolation and lack of alternatives of workers who live in isolated rural areas and in most cases lack access to any means of transport. During the time of the fieldwork in Vittoria, workers on bicycles at the border of the streets were crossing the extensive greenhouses were visible all the time, especially in the Marina di Acate area, where the concentration of greenhouses is very high. In most cases, the main means of transport used by

farmworkers are bicycles or aged scooters, used to cross the same provincial roadways, often with little or no lighting, were cars generally run at very high speeds. In the months spent in Vittoria, there have been several episodes reported by local newspaper, where farmworkers were killed or run over by speeding cars along provincial roads in the local area. To address this urgent problem and reduce the phenomenon of illegal transportation and of the *caporalato of services,* some ONGs, local associations, and trade unions have promoted projects to support farmworkers and provide for them possible solutions for transports between the main urban centers and the greenhouses[89].

1.3. Living next to urban centers

During the fieldwork conducted in Sicily, most of the workers interviewed were met for the first time, during participant observation at the Caritas center in Marina di Acate. In this context, nearly all the workers seeking assistance from the facilities and services organized in the Caritas center, were migrants in conditions of extreme marginalization, who often faced difficulties in speaking Italian or even French. Most of them arrived in Italy quite recently, with little or no prior contacts with locals or migrant workers who were already located in the area. As the operators of the Caritas center noted from the outset and as was evident during the initial days of observation, almost none of the workers met lived in the towns or in the urban centers nearby; instead, the majority resided in housing adjacent to the greenhouses. It would therefore be quite difficult to

[89] During the period of fieldwork, one of the main activities of the Caritas Presidium was the organization of afternoon activities for farmworkers' children who were also living with their families next to the greenhouses in Marina di Acate. To ensure the participation and access to the activities, the project also provided free transport for the children's and young people from the children's home to the structures where recreational activities took place. On several occasions I also went together with the driver of the van to pick up the children during the routine rounds. All the children were sons and daughters of Tunisian, Romanian and sometime Albanian or Moroccan farmworkers. As the social workers operating within the children project told me, daily activities start after the van finishes the tour of picking up the children in the surrounding countryside where they live with their families next to the greenhouses in houses, garage or storages turned into accommodations for farmers. During the afternoon spent in Marina di Acate, doing research and participating to the activities organized both with the children and with migrants' farmworkers by operators and social workers, the coordinator of the project stressed several times the relevance of the lack of transportation and in contributing to favor a level of isolation that was structural and was precluding farmworkers' access even to the most fundamental activities. "Often it happens that parents cannot drive their children to school because it is not compatible with their working hours and their shifts. A., the social worker in charge of educational activities with the children just told me that once it happened that a farmworker asked his boss if he could change his work shift to be able to pick up his daughter from school. He was answered that he could have do that, but in exchange he should have bring his daughter to work in the greenhouse for the same amount of time he lost to go pick her up" (Fieldnote diary, May 26, 2023).

explain the presence of a long-term worker, now established within the urban fabric, at the Caritas center in Marina di Acate. From the very first interviews, a distinct division emerged, particularly in terms of nationality, between the workers living in the countryside and those residing in the cities.

> "Almost all those who live in the city, in Vittoria, Acate, Comiso or Santa Croce di Camerina, are Tunisians or Romanians who have been here since a long-time. But I have to say that I think that most of those who work in the fields or in the greenhouse, also prefer to live nearby. It's true that many live in very poor conditions, but others have built their own houses there, they have even started their own business and in the end live in fairly decent conditions"

(Interview with social worker of the Caritas Presidium of Marina di Acate. Marina di Acate 4 June, 2023)

Giuliana Sanò (2018:73) referring to an interview with one of the priests she interviewed in Vittoria in 2014, describes how many residents of Vittoria have sold or rented out their apartments to migrant farmworkers and their families over time. Additionally, frustrated by the "mass" arrival of migrant workers in the central areas of the city, tensions have emerged between the locals and the increasing number of migrants, particularly near certain parts of the city, such as the areas around Piazza Manin, known as the "square of the Tunisians". Piazza Manin is one of the city's main squares and represents one of the main social spots for Tunisian migrants who have, over time, shaped and transformed the urban and rural space through their social and economic practices, which become part of a broader social context. As Piro (2020:27) suggests, the majority of migrants residing in local urban settings are indeed Tunisians who, sometimes with their families, live in rented or even purchased apartments.

As migrant workers living in the countryside reinterpret rural spaces according to their needs, also migrant workers living within local urban centers do the same. Throughout the period of fieldwork in the province of Ragusa I spent most of the time in Vittoria and in the surrounding areas. Here, the presence of agricultural workers both within and outside urban areas remained consistent, despite the notable variations. In rural areas, the visibility of migrant workers was typically linked to specific activities, such as returning from work or riding bicycles or malfunctioning scooters. Thus, they were predominantly migrants in transit, with little observable open places where to chill after work. This was partly due to the spatial constraints that offered

few opportunities for communal gathering in a context where the landscape is mainly characterized predominantly by greenhouses interspersed with busy trafficked roads where vehicles generally travel at high speeds. Conversely, social dynamics among workers in urban centers demonstrate several differences, with public squares assuming a central role. In this regard, the Tunisians' square In Vittoria not only functions as a site for gathering, but also serves as a space for identity formation, exchange and informal recruitment of workers, which is closely associated with traditional forms of *caporalato.* The significance of these public squares is also evident in smaller towns. For instance, in Marina di Acate, the small coastal district within the municipality of Acate where the Caritas Praesidium is situated, the area surrounding the center constitutes one of the primary meeting points for migrant farmworkers living nearby. The facilities that host afternoon activities for children and provide clothing distribution and legal-medical support, are located adjacent to a large square that functions as a parking area and overlooks the beach. Marina di Acate effectively operates as a tourist destination that experiences a dramatic transformation during summer months. While the town is entirely deserted in winter, with only agricultural laborers residing in the accommodations adjacent to the farms, it becomes inundated with tourists and locals returning to their second homes by the sea, during the summer season.

This seasonal change significantly impacts the organization of agricultural laborers' lives in ways that may initially seem secondary yet reveal important dynamics that underpin the reproduction of their livelihoods. Having conducted my fieldwork starting in May 2023 and continuing through the subsequent summer months, the transformation and transition from the "winter" period to the "summer" season became particularly evident and rapid.

> "Today, I went to the presidium in Marina di Acate by car. Usually on the last stretch of road that runs alongside the fields and arrives at the centre of Marina di Acate, I am forced to slalom with the car to avoid the big holes in the middle of the road. For the past few weeks, the holes have always been there and I had by then learnt the best techniques to avoid them, but today they suddenly disappeared, covered by large patched of dark concrete. I continued my usual route to the presidium and noticed that other things had changed. Whereas before the parking lot between the praesidium and the beach was a large, rather uncultivated expanse of concrete, with a few clumps of grass here and there and piles of sand blown in by the wind days, today everything was clean and tidy and even some silhouettes drawn on the ground with white paint to mark out the parking spaces had appeared. When I entered the praesidium and greeted the

> coordinator, I told him about these changes I had noticed and asked him if it had anything to do with the fact that the summer season was beginning. "*Of course, in the summer the tourist village starts here, and everything has to be cleaned up",* he replied with a hint of irony and bitterness".
>
> (Note from fieldwork diary. Marina di Acate, 20 June, 2023)

The continuity between urban and rural spaces is thereby integrated with the broader set of transformations experienced by the territory, which is shaped primarily by its dominant economic activities: agriculture and tourism.

One of the key dynamics affecting the living and housing conditions of long-established migrant workers in the Vittoria area—particularly Tunisian and Romanian laborers—relates to their social mobility opportunities and choices. From this perspective, it is important to recognize that the mobility decisions of migrant workers are not solely driven by labor-related factors, nor do they manifest exclusively as individual strategies. As suggested by Piro (2020) and Alberti (2020), although these choices are often perceived as individual in nature and may appear unorganized, mobility strategies remain a crucial arena for the assertion and resistance of migrant workers. Chapter 6 discusses how mobility power is enacted by migrants in relation to their work context in an effort to improve their working conditions. In this context, employment trajectories profoundly influence living conditions, particularly in the area of the Transformed Littoral Strip, where the majority of the labor force is employed in the agro-food sector—including local workers—and where the boundary between rural and urban environments is notably tenuous. Additionally, there is an overall lack of services—particularly public transportation—which complicates the decision to reside in urban centers, especially for those with relatively short migration histories or those without access to private transportation. According to Anna Cortese (2020), the housing choices of migrant workers are also influenced by various integration models within the local context, particularly within the sector of employment. The agricultural sector serves as a somewhat obligatory entry point for migrant workers given the low level of specialization required and the high demand from the local economy. This situation can lead to the hypothesis of a reduced potential for social mobility within the agricultural context, which exerts a significant influence on migrant laborers. This is particularly true when considering horizontal mobility—particularly sectoral mobility—while vertical mobility—which implies upward social

and occupational recognition—may lead some long-term migrants to start small agricultural enterprises. Considering the overall number of migrant workers that arrived in the area, the low levels of sectoral mobility characteristic of labor in the Ragusa area, combined with the tendency of long-standing migrant workers to transition into small business ownership, has resulted in a limited movement of these workers within urban areas. This is primarily due to the fact that small entrepreneurs generally prefer to remain close to their land to maintain continual oversight of their properties and holdings. As will be explored in the following sections, parental pressure exerted on children also plays a central role in significantly influencing the mobility trajectories of younger generations, starting from their educational choices.

2. Forms of negotiation and resistance for better living conditions

The lack of transportation therefore exposes workers to a structural isolation that forces migrant farmworkers into a constant negotiation of services and primary needs, often intermediated by third parties, and primarily related to transport and mobility for the access to school, sanitary and basic daily services. This negotiation often follows differential rules and criteria shaped by the everyday institutional racism that defines work and life experiences of migrant workers. As emerged in Chapter 6, and as stressed by Alberti and Sacchetto (2024:134), in many cases the experience of migrant workers is caught between labour, capital and statal rules that in turn makes it very difficult for them to plan their time and their daily routine beside working hours. The infrastructural dimension of intermediation (Piro, 2022) influences negotiations as an ongoing aspect of labour relations, particularly for migrant workers. This particularly emerges in relation work effort, wages and the number of working days reported on monthly paycheck, which ultimately determine access to various levels of the unemployment subsidy and affect shift schedules[90]. Moreover, these multiple negotiations are often shaped around multiple differentiated

[90] In this respect, several of the workers interviewed mentioned the general change in shift patterns for workers employed in the greenhouses, mainly linked to the heat and therefore the possibility of changing shifts, especially in summer, when they prefer to work at night to avoid the hottest moments of the day. However, while some employers leave workers free to change their shifts according to their personal preferences and in accordance with the member of teamwork, other workers argued that this was not possible and that the schedules were mainly decided by the employers, leaving them no room for negotiation. To this extent the main difference in employers' attitudes was mostly related to the size of the farm and the relationship between farmworkers and employers, with smaller farms leaving more autonomy to workers at least concerning shift schedules. In most cases, those who were able to set their schedules autonomously, preferred to work during the night shift, even starting at 2 or 3 a.m. to avoid working with sunlight. On the other hand, employers who preferred to maintain a stricter control over workers' schedules, preferred

levels and by daily and institutional racism that characterize the working and living experience of migrant workers.

From this perspective, the story of Amina[91] and her husband, from this perspective is particularly interesting as it allows to comprehend and indefinite uncertainty surrounding the productive and reproductive life of migrant workers in the Transformed Littoral Strip. Amina is 26 years-old Tunisian women that I met at Marina di Acate, during the afternoon spent conducting participant observation at the Caritas Praesidium. I met her the very first day I went there to join the activities of clothes distribution that were usually taking place on Tuesday afternoons. Amina, as me, was there every Tuesday to do "voluntary" work as a language mediator as required by school regulations (alternanza scuola lavoro). She was mostly translating to the operators and to the other volunteers the needs and requests of Moroccan and Tunisian workers who only spoke Arabic. Since the very first times we met we talked a lot and she told me that she got married the year before and that her husband, a Tunisian farmworker, works in a greenhouse next to their place. The employers, owns several greenhouses and run a medium-sized company that grows and sells tomatoes. As soon as I meet and become closer to her, I understand that her story is emblematic of the several contradictions, tensions and differentiations taking place in the area.

> "Today I went with Amina to Vittoria as she asked me to give her a ride since she had to go to the post office for picking up some documents for the renewal of the residence permit. I went to pick her up at her place. With her husband they live in contrada Alcerito, one of the many areas where migrants and farmworkers live "hidden" between the greenhouses. They live in a house that is quite nice, with two flores: one kitchen, two bedrooms, a toilet and a huge terrace on the top from which one can have a view of all the surrounding landscape of greenhouses and fields. The house where they live is her husband's employers, who rent some small buildings they have next to the fields to their farmworkers. I went to pick her up and then I drove her to Vittoria where after the post office she needed to go to the labour consultant to check for some documents. Before, we stopped at a bar in the main street of Vittoria, where we had an iced tea, and we chatted a bit. She told me a bit about her family. Together with her parents and her 5 brothers and sisters, she arrived in Italy in 2004. She is the only one among her siblings who finished school and she graduated few weeks before at

to impose daily shifts, although starting very at 6 a.m. when, however, the temperature within the greenhouses already reaches over 40 degrees after a few hours.

[91] The name has been changed to protect the anonymity.

the local linguistic high school. She was very proud of herself when she told me she scored 74 at the final exam, and she told me she did her term paper on migrants living in Vittoria. "*I could finish school because when I got married only one year of school was missing before the diploma. Instead, my sisters went to school in Tunisia and that's it. All my sisters are married, there's only one that is still missing, but she will get married this summer. But I said that I would have get married only if my husband would let me finish my studies. And after finishing school now I'd like to go to university and become a cultural mediator. I want to work. I want to earn my own moneys and have my own bank account. Only by doing this I can hope to go and live in Ragusa one day".* Together with her younger siblings who are still living with her parents, she is the only one who lives in Vittoria. Two of her sisters are living in Trapani, while her brother lives in Milan with his wife. After we paid at the bar, she started asking me a lot of questions about how does university work, how much does it cost and weather it is mandatory or not to attend courses and classes".

(Fieldnotes. Vittoria, July 6, 2024).

What emerged later on, when I had the chance to interview her and also her husband, was that her willingness to invest on her future education, to study and to go to university, were actually clashing with different interrelation and structural elements that have partially already been mentioned in the previous sections. As Palidda (2020) stress, the case of Tunisian and Romanian women in the context of Ragusa, interacts with multiple aspects, often leading to unexpected results considering multiple aspects: occupational integration and the redefinition of traditional gender roles by favoring the assumption of emancipatory models, particularly among Romanian women. To this extent, the interview and the dialogue with Amina and her husband, showed two different views which came into tension when talking about their expectations about their future perspectives, intertwining with a wider set of challenges and problems they were facing due to their employers and landlords.

Husband: Amina has studied a lot this year, also during the night. Thanks god she got her diploma, because this last year has been really tough for me. She must help me now, because for me is very hard to work like this.

Amina: But I also went through bad and very heavy periods that remain with you afterwards. Like those four months without water, without light. It was ugly.

You eat in the dark, you cook in the dark, you study in the dark. You can't even cook properly because you have no gas.

Interviewer: But why didn't you have gas or electricity?

Amina: Because the neighbors living next by were not paying their bills. So, the landlords cut off the light also to us because they were connected (the electric system). Then after they kicked the neighbors out, they wanted us to pay what they didn't pay otherwise they won't reactivate the light back.

Interviewer: So, now they don't live here anymore?

Husband: No, they left. Now the building is empty but there are still a lot of residencies recorded there.

Amina: And before they left, they told us that they couldn't reactivate the light back again until the neighbors were there, so she was trying to turn us against each other. And they wanted us to tell them to go away but I said no, because it was not our role to talk to them. He's the landlord so he has to talk to them. And they are like this every time. They only ask money, especially the wife. On the 29th of the month she calls you already and ask to prepare the rent payment for the 1st of the month. When we didn't have the electricity and the gas, we once were a bit late with the payment. She called me on the first day of the delay and she told me *"Please prepare you luggage and move out because I need your place".* We were with no electricity or gas, and she wanted us to move out straight away. So, I had to ask my father for a loan to pay her back on time because for us is very difficult. I know the rules here, I know how it works, but they pretend we don't. Once when I was still going to school, they even asked my husband *"Why do you let her go to school and she doesn't help you working in the greenhouses?".* They believe that by going to school I can't help, but with the diploma I can work, and I can help him. I know that if you go to school, you have a better future rather than working in the greenhouses.

Husband: That's right…she must help me a bit by working…

Amina: Once I even asked her (to the landlady) if she could drove me to school since I was going to the same school of her daughter. Because I didn't have a car and it was not very easy for me. So, usually I was walking with my husband at my parents' place which is next to the place where one of my professors was living so that she could give me a ride. But since she (the landlady) if she could drive me to school since she was going in the same direction. She told me "*No, it's difficult for me because then I would have to drive thirty minutes more".*

Husband: We would also like to move but the problem is the residency permit. Because as migrants we need to have a residence permit together with a labour contract. The job is quite easy to find, but the residency is the problem,

that's not easy to find. You need to have both. The residency and the labour contract".

(Interview to Amina and her husband. Vittoria, July 7, 2024)

This interview provides significant insights into multiple aspects of the couple's relationship with both productive and reproductive work. It highlights the constraints stemming from migrant workers' dependence on employers for both income and accommodation, reflecting the employers' interests and priorities. Additionally, it sheds light on the local context of segregation which poses considerable challenges for migrant workers in accessing suitable and dignified housing solutions. Finally, the discussion reveals the overarching policy framework that ties migrants' legal presence to the possession of formal housing contracts, and more specifically, to the ability to register their residence in accommodations that meet predefined and acceptable standards. From this point of view, the residence requirement of the Italian law (Bossi-Fini Law No. 189 of 2002), as a condition for the recognition of residence permits, significantly reduces the ability of migrant workers to exercise their labour mobility power when residence is linked to housing rented by employers. From this point of view, several authors (Alberti and Sacchetto, 2024:119; Mezzadri, 2021) suggest overcoming the opposition between the spheres of production and reproduction, since only in this way is it possible to understand how both define the spaces in which the mechanisms of labour control operate as well as the spaces of rupture and resistance exercised by migrant workers. As the two Tunisian workers explain, and as many of the interviews conducted in the Ragusa region show, while finding a job is straightforward, even considering possible differences in wages, working conditions and treatment by employers, it is the housing dimension that represents the main challenge for local migrant workers. The lack of public transport makes it extremely difficult for farmworkers to live in dwellings and housing solutions that are far from their place of work, and the lack of public transport makes it hard for them to find a job. Therefore, the absence of public transport encourages many workers to prefer solutions that imply living next by their workplaces, with the result of sharing the spaces of production with that of reproduction and therefore to housing that is often rented directly from the employer. To this regard, residence constraint is therefore another element that acts on the relationship between productive and reproductive spaces, further favoring the compression of wages and acting on the flexibility and blackmail of migrant workers. In a context where the availability of rooms and flats

is extremely limited, therefore, living in employer-provided dwellings negatively affects workers' mobility, allowing the employer – who coincides with the landlord – to further reduce labour costs by using residence as an element of blackmail.

As stressed by Perrotta (2015), housing segregation represents one of the structural elements that shape the conditions of marginality and precariousness of farmworkers. This element has been partially recognized also by the Italian legislation (law 199/2016) which provides one of the most ambitious legislative attempts to contrast the phenomenon of *caporalato* and of illegal intermediation. Beside the provisions concerning labour relationship and labour conditions, the law also defines elements and interventions concerning exploitative housing conditions, delineating specific guidelines and standards that must be respected particularly by employers that provide accommodations to their workers. To this extent, if the employer offers housing in unhealthy or overcrowded conditions, he may be prosecuted for labour exploitation. However, some of the employers interviewed, who were actually providing their workers' accommodations expressed their skepticism concerning the requirements defined by this legislative instrument.

> "Initially we provided an accommodation to our workers. We didn't know at the time – and most of the companies didn't' know – but there was a change with the caporalato law…we realized that it was not convenient for us to have people living in the company. Because what can happen? You give them a nice, clean house, but if don't go and check if they clean, they're house every day…if they (the inspectors) come to check on you, they enter and they find that they haven't clean…then they can say "look how they treat the employers, how they make them live!", and maybe they (the workers) are the ones who haven't cleaned. In some cases, that can happen. In others they (the employers) really made them live into garages, but here to me it happened that they simply didn't clean. And then, after that law (the caporalato law) we decided that everyone had to leave and move to their own hose. (…) So many Romanians rented their own houses independently, in many places Romanian shops opened, in Vittoria there are two shops of Romanian food, one is in Scoglitti. There used to be continuous buses from Sicily to Romania. Now there are fewer of them, because there are almost no more of them (of Romanians). And then of course many people live in the fields…but because they want to save as much money as they can. Many of our Romanian workers here live like beggars (straccioni), but then back at their home country they have built castles there. Because it costs very little to build a house in Romania, with 20, 30 thousand you can build a beautiful house. They get a lot

> of money working here, because in many cases, especially when Romanians arrive as couples, they work all the time, and then they also get the unemployment subsidy"

(Interview to farmer of a large organic and conventional company in Niscemi. Niscemi, June 1, 2023)

The prevailing tendency to evade the acknowledgment of structural responsibilities related to the precariousness and often even the exploitation of migrant labour, coupled with the inclination of several employers interviewed, to blame migrants for their own working and living conditions, can be viewed as part of a continuum. This continuum extends to numerous operators within fruit and vegetable markets who outsource certain services to private recruitment agencies responsible for harvesting and logistical tasks. Given the inherently asymmetric nature of labour relations and the logic of supply chains - particularly concerning the agri-food supply sector - the tendency to move risks, responsibilities, costs and uncertainties from employers on workers, illustrates how the introduction of various levels of intermediaries, whether formal or informal, ultimately favors a process of de-responsabilization on the employers' side. This context also elucidates why several scholars who have examined working condition along global supply chains (Jaehrling, 2015; Pedaci, 2016) have particularly emphasized the role of third parties, which facilitate employers' delegation of responsibility and constraints that finally contributes to reduce the overall cost of labour, the level of responsibility on the employers' side, favoring an increased control over workers. However, this form of deresponsabilization concerning labour relationships, doesn't only concern employers, but also workers who find strategies to determine and act their agency over exploitative and segregated working and living conditions. In her research focused on migrant farmworkers employed within the Trasformed Littoral Strip, Piro (2020) describes this type of subversive behavior referring to James Scott's (1985) "weapon of the weak" used to describe the tricks and strategies used by workers to increment their salaries. To this extent, one of the farmers interviewed, stressed how migrant workers' – especially Romanian ones - have organized into a quite structured illegal market of stolen products to be sold and sent to Romanian compatriots back in their own towns of origins.

> "Every time that the Romanian bus departs from Vittoria towards Romania, the bus always has a trailer attached to the back. So, there were Romanians who

> wanted to send back to their relatives some oranges or tomatoes that they were just stealing from their workplace, because they didn't used to buy them. There was an incredible trade in stolen goods to Romania. They would bring all the stolen goods with the buses that from Vittoria go directly to Romania. Once, one of our former employees was caught bringing stolen goods within a refrigerated semi-trailer that was attached to the bus they were traveling in. They basically had two floors within the trailer where they were storing the goods. So there was an impressive trade of things departing from Italy. Some friends of mine, who have a business say that they can't even leave a pair of scissors outside, any type of tools, cause otherwise they steal it and send it to Romania. There is a reason for this…because many of the workers who are employed here, do not even have food there. Romania was a very poor country and, in the winter, they only used eat wild grass. Now maybe it has improved a bit, and the emigration has brought some richness also within the country…but anyway, by stealing oranges, tangerines, tomatoes and many other goods…what are they supposed to do"
>
> (Interview to a farmer in Marina di Acate. Marina di Acate, July 15, 2023)

According to Scott (1985:300) - who has studied how marginalized groups as peasants and farmworkers engange in everyday forms of resistance – workers' intentions are inscribed in the acts themselves. By comparing the act of a soldier deserting from the army and a farmworker stealing goods from his employer, both are "saying" that their needs take precedence over the formal property rights of the boss, just as the soldier's family and personal needs prevail over the purposes of his institution. In thus emerges how the social settings and material interests of the appropriating classes – in this case, farmers's and employers' priority to make profit with cheap labour and cheaper costs for the social reproduction of labour - are in direct conflict with farmworkers. These behaviors can also be perceived as intentionally aimed at questioning the systematic tendency to deny the legitimacy of farmworkers' claim. Indeed, in most cases – the objectives of farmworkers' actions, even when aimed at affirming their own actions of auto-determination, is not to overthrow the entire system of farmworkers' exploitation and marginalization. Rather, their actions are aimed at surviving and opening spaces for individual and collective struggles within this system to negotiate improved working and living conditions, either formally or illegally. On the other side, these set of actions has also favored the emergence of a negative stigma on the side of local employers, especially against Roma workers, who are

generally considered those responsible of illegal actions and therefore less reliable than other workers.

Moving back to the problem related to the general shortage of suitable accommodations and available buildings for the registration of residencies needed to obtain a residence permit, another "illegal" tendency has emerged that concerns the intermediation and the selling of residencies or even of fake housing arrangements to migrant workers. Indeed, in many cases, the properties where migrant farmworkers reside – often chosen for their proximity to workplaces – fail to meet the legal requirements (in terms of size, security standards, etc.) for transferring a regular residence permit. This situation has therefore fostered the rise of illegal intermediaries who arrange fictious accommodations in buildings from those where the workers actually live. During one of the afternoons spent at the Caritas presidium in Marina di Acate, it emerged clearly how the issue of the residence permit represents a profitable terrain for some intermediaries, giving them the chance to make profits on the requirements of Italian migration law. The lawyer operating at the presidium has indeed explained that in many cases residencies are sold to migrant farmworkers, often in different buildings from those where they live.

> "This is actually quite common around here, there is a proper market of house residences and often it happens, for instance, that workers who live in sheds (baracche), in accommodations that are not regular and legal, beside paying the rent, also have to pay for the actual registration of the residence permit in other places. This is often linked to a whole system of intermediation that goes from workers' entrance in Europe, to the assistance in finding a job, to residence and accommodations. For instance, right now I'm assisting this worker who arrived through the decreto flussi[92] as a seasonal worker, and the problem was that once he arrived the employer that was supposed to hire him did not exist. Initially he said he didn't pay any intermediary, then he admitted that he paid 6,000 euros to get the agreement from the employer for the entering in the EU. And after he paid the employer disappeared. Basically, he paid this amount of money, which is a lot, and then this intermediary, which maybe was a relative, a friend, I don't know, ensured him that he would have obtain the visa because he (the

[92] The Decreto Flussi is an instrument defined by the Italian legislation to regulate the entrance of migrant extra-EU workers. It is an annual measure in Italian legislation that regulates the entry of non-EU workers in Italy for employment purposes and sets annual quota for the entrance of migrant seasonal and non-seasonal employers. This instrument provides that employers submit applications electronically providing employment details, workers' data and conditions (e.g., salary, accommodation etc), and then workers apply for an entry visa at the Italian consulate from their country of origin.

> intermediary) presented the demand (for the quotas that then become part of the Decreto Flussi). Because at the end what happens, that this system is based on precarity, on the speculation. There is the need on the side of workers to obtain the residence permit and therefore to have a regular residence, a labour contract, and this favours the rise of a whole system of intermediation, a proper market, where everything can be sold, from the residences, to transport, to labour contracts".

(Interview to D., lawyer operating also within the Caritas presidium of Marina di Acate. Vittoria, June 23, 2023)

To this extent, intermediaries – who, in other contexts, may also take the form of recruitment agencies, exploit migrant workers' need to meet specific requirements for their legal entrance and permanence, which often leads to the reproduction of irregular or illegal strategies. As noted by Schrover (2018), these intermediaries operate within a broader set of migration infrastructures – which include the collection and management of documents, the identification of potential employers, and the navigation of governmental migration policy procedures. These processes highlight how intermediaries play a critical role in reproducing structures of control and employment. Such structures, while embedded in the formal migration framework, are often mediated through informal or exploitative practices, thereby influencing migrant networks and perpetuating systems of dependency and regulation within the overall migration infrastructure.

Thus, it further emerges from several interviews and fieldnotes, that housing does not always correspond to official residency. And that in many cases, owners of empty and uninhabited buildings, allow to register migrants' farmworkers' residencies there, although they are not living there, often selling this possibility to capitalize from migrants' need to align to migration policies. As noted by the lawyer interviewed, who is supporting the activities in the legal office of the Marina di Acate Caritas praesidium, there are cases where residency registrations are sold to migrants who do not actually reside at the declared address, as also Amina and her husband were saying while talking about the buildings were neighbors used to live before being kicked out. During one of the afternoons spent at the Marina di Acate Caritas praesidium, it emerged that the residency registration itself has become an additional commodity through which certain local actors, exploit opportunities for financial gain. Some of these actors are well-known in the area,

such as in the case of the manager of one of the main beach bars in the area, which became a sort of gathering point for several migrant farmworkers living in Marina di Acate.

> "Today, during the weekly distribution of clothes there were few people. Many, as I had been told by the project coordinator, had returned to their home countries for a few weeks in view of the short summer break. At the legal desk, however, and Albanian family arrived. I have already met them, since the two kids participate in the afterschool activities organized in the center. D., the lawyer, explained me that they're plan is to ask for a residence permit and a regularization of the two adults, but they have a problem with the liveability of the building were they're currently living next to the greenhouse, because the building doesn't meet the requirements for hosting four people. Their landlord at the moment is a very well-known figure in the area of Marina di Acate, who "helps" several migrant workers struggling with documents, housing and contracts. He has been mentioned to me several times both from the social workers working at the praesidium, as well as by several workers, as a rather shady individual, involved in some not entirely legal business dealings. According to the couple of Albanian workers, he would like to rent them a rather small flat, which is the only one they can afford given their financial situation, while concluding a loan agreement on another larger flat, where they could legally register the residence of the whole household. "It is a matter of writing a declaration of hospitality for the family" – said the landlord once he arrived to explain the situation to the lawyer – "because I have these four flats which are all built illegally, therefore you cannot make a proper contract. But we can conclude a declaration of hospitality, so that they can move and register their residency there. If the police come to check then it's not a problem, because I know them, they are my friends, so they would trust me. Also, if the police would come, they would tell me first because we know each other. I built for houses without submitting any project to the municipality. I built four houses without a project on a 100 square meter plot. The problem is that these houses are too small, they are good for a couple, for two people, but not for a family with two children". As I was missing some of the main aspects of this conversation, the lawyer has then explained to me after, plan is to rent them a larger flat, with a hospitality contract, since these are illegal houses where they cannot register a proper contract. With the hospitality contract, however, the landlord would like to register the residence that is needed for the residence permit. So what he wants to do is to rent them the smaller, non-standardized flat, while recording their residence in the other larger flat, trusting that the police – to which he is close to

> – will not come and check the regularity of the buildings and of the housing loans. The lawyer underlines that this has not been the first time he came proposing some of these "tricks", and according to him the buying and selling of residences, is actually something that happens very often there".
>
> (Notes from the field diary, June 27, 2023).

Building on Xiang and Lindquist's (2014) concept of *migration infrastructure*, Alberti and Sacchetto (2024), explore the complex and multifaceted interaction between formal and informal actors in influencing migration processes. They underscore how these agents – states, intermediaries, and migrant networks – operate not within strictly delineated roles, but within fluid and intersecting spaces of agency, power and interest. The state, traditionally viewed as the primary arbiter of migration control, often interacts – in an indirect and often unexpected way - with intermediaries whose activities are not solely profit-driven, but also embedded in broader systems of mutual support, often engaged in forms of informal intermediation that blur the lines between self-help, exploitation and adaptation.

2.1. Challenging victimizing narratives

Looking at the existing literature that has explored the working and living conditions of migrant women in the Transformed Littoral Strip, several contributions stressed the interlinked aspects that contribute to produce and amplify their conditions of marginality and segregation. Letizia Palumbo (2022) has stressed the need to overcome dichotomies that tend to oppose exploitation and consensus; production and reproduction (Mezzadri, 2021); vulnerability and agency, which are often sustained especially by the juridical discourse. Indeed, these dimensions cannot be properly be understood without considering the overall aspects that characterize both the local production system and the reproduction of workers within the local context, where exploitation, gender segregation and oppression are particularly exacerbated by aspects that have been already mentioned in the previous chapters and that are primarily linked to the sexual division of labour, to gender roles, but also to class and ethnicity factors, and to the stratification of migrant labour that is produced by different migration status (Anderson, 2010; Mezzadra, Neilson, 2014). To this extent, one of the primarily distinctions that emerged from the narratives of those interviewed since the very first days of fieldwork in Vittoria, is that between Tunisian and Romanian women,

representing the main components of local migrant labourers. To this extent, Palidda (2020), has stressed how the femininization of migratory processes has particularly contributed to differentiate these two main groups. For the first two decades following the massive arrival of Tunisian workers in the province of Ragusa, migration flows were predominantly characterized by single men, with their families often remaining in Tunisia.

However, from the second half of the 1990s onward, there was a gradual increase in the feminization of Tunisian migration. This trend was later reversed, primarily due to the growing challenges in the recognition and approval of family reunification applications. This shift in migration patterns, can be understood within the broader context of changes in migration policies and the evolving dynamics of labor migration. On the other hand, with the 2007 of Romania within the EU, the increase of Romanian workers has increased significantly finally overcoming the presence of Tunisians which has been possible mainly due to the strong presence of women, which significantly exceed even the presence of Romanian men. Rigo (2022) emphasized the link between processes of social reproduction and regimes of migration regulation, showing how the proliferation and diffusion of borders is a process that forcibly assigns migrants to hierarchical regimes not only of labour, but of the reproduction of life itself. Therefore, rather than focusing on the contribution of migrant women to the activities of social reproduction in the countries of arrival, it is necessary to stress the centrality of mobility, which comes together with a claim of freedom of movement, as a fundamental component of social reproduction itself (Ibid). Indeed, while juridical perspectives play a critical role in structuring and confirming a conceptual separation between production and reproduction, the possibility to improve the conditions of social reproduction of migrant are at the very heart of migration mobility.

To this extent, the increased presence of migrant women in the context of the Transformed Littoral Strip, is in continuity with a global trend that experienced a significant growth of transnational flows of migrant women[93]. Therefore, this trend has contributed to consolidate what

[93] According to the IOM (2021) as of 2019, women made up 41.5% of migrant workers globally. These dynamics have also highlighted a gendered divisions within the broader patterns of global labour market, with male migrants predominantly employed in industries such as construction and manufacturing, while women are usually mostly employed in the service sector, especially domestic work and healthcare. Looking specifically at the EU, data from Eurostat reveals a more balanced distribution among male and female migrants, with nearly equal numbers: 50,4% men and 49.6% women in 2022. However historical trends indicate that the gender gap has fluctuated over time. In the 1990s the rate of feminization of migration to Europe began to rise, but recent shift, especially linked to the restructuring and the increasing restrictions of family reunification policies have led to a decrease in the number of women migrants in certain contexts, particularly for extra-EU migrant populations.

Arlie Russel Hochschild (2004) has referred to as the "global value chain of care" to refer to the transfer of *affective* resources from countries of departure to countries of arrival. To this extent, it is particularly significant the contribution of Alessandra Mezzadri (2021) whose radical understanding of social reproduction – especially in relation to informal labour - allows to capture the ways in which reproductive activities contribute to the extraction of labour surplus. Mezzadri (Ibid) focuses on how this is made possible through three main processes: the strengthening of labour control across industrial housing arrangements (which has been explored and analyzed in the previous chapter); the participation of reproductive activities in absorbing the externalization of costs necessary for the social reproduction of labour; and the creation of value through processes of formal subsumption of labour incorporating the lower rungs of the informal economy, such as home and care work, in capitalistic circuits (Ibid). Considering the living and working conditions of migrant women within the local context of the Transformed Littoral Strip - characterized by high levels of informality - from the perspective of social reproduction allows to capture how segregation, sexual differentiation of labour, and differential access to welfare, represents a systematic dimension of the working and living conditions of migrant women in this agricultural enclave (Piro, 2020; Palumbo and Sciurba, 2015). Thus, while analyzing the complex manners through which migrant labour is exploited, it is not possible to ignore the broader dimension of social reproduction which traditionally refers to all the set of activities needed for the reproduction of life from both a symbolic and material perspective: cooking, cleaning, bringing up children, caring for family members and the elderly, but also creating serenity, indulging in pleasures and maintaining social ties (Mezzadri, 2021). To this extent, the agricultural sector, where production is often based on the reduction of reproduction costs of migrant farmworkers – especially concerning housing conditions, access to public services and transports – is particularly significant.

One of the most insightful perspectives for observing these aspects has undoubtedly been through the activities organized within the Presidio Caritas of Marina di Acate. In addition to clothing redistribution, medical-legal support, and activities for minors, a project funded in recent years initiated a support desk aimed at facilitating access to and providing socio-health orientation support for migrant women and female workers in the area[94]. This service immediately

[94] The women's support desk is one of the actions envisaged in the social area of the project "*Trasformare la Fascia Trasformata"* promoted by the Fondazione con il Sud, together with several associations active in the province of Ragusa (Associazione Tetti Colorati Onlus, Cooperativa Proxima and Associazione Altro Diritto ONLUS) together with the local secretariat of the CGIL. The project aims to intervene in three main areas. The first is the promotion of

experienced a very high demand from users, far exceeding the expectations initially outlined during the project's planning phase. As explained by one of the operators responsible for the helpdesk activities interviewed during the research period, the initially goal was to engage women who already had ties to other project activities – particularly mothers of children already involved in the educational programs, female farmworkers who referring to the medical and legal support initiatives, or women reached during the moments clothing distribution. However, word-of-mouth among the women initially involved in the support-desk activities, contributed to raising awareness of the helpdesk's activities and services, allowing to reach women who were not previously engaged in any of the other project components.

> "The activities and services we provide have been changing and adapting according to the needs that emerged over time. Because initially the activities were planned to be mostly oriented towards social and health assistance of women that we met in the other activities the broader project provides. So, for instance, if I know that a woman farmworker that comes to the legal support has never had a mammography, I explain to her what it is and where she can have access to one. But since the very beginning we realized that a lot of work also needed to be done concerning prevention aspects. Because most of the beneficiaries were coming to us only when they already have a disease, but they have no idea what prevention is. The concept of prevention is absolutely absent. So, spreading the concept of primary, secondary prevention was also essential from the very beginning. (…) This aspect has been somewhat underestimated since the very beginning. Both because we started to deal on a daily basis with many women who often have different stories, different backgrounds although there are also some denominators. They are all women who have mostly forgot their individuality, so they're not used to dedicate some time, even when it's about health, that is exclusively for themselves. And this is something that they all share. The women I have in charge are mostly Tunisians. Some are Albanian. There's a Moroccan woman and then of course, the majority are Romanian women. So, we are talking about two main factions: that of the Romanians, and that of the Tunisians. And there are significant differences between the two

social inclusion, which includes wide-ranging territorial education activities, activities aimed at housing integration, and finally activities aimed at socio-healthcare orientation, including the action of the women's support desk. The area linked to the fight against labour exploitation, which include measures to promote job placement and respect for the rights of migrant workers. And finally, the area linked to environmental and landscape rehabilitation, with initiatives to combat environmental degradation. The aim of the project is to "combine a greater awareness of their rights on the part of workers, the acquisition of alternative and correct practices on the part of companies, and greater co-responsibility on the part of citizens in their lifestyles and consumption".

> groups, mostly related to two different backgrounds. The Tunisian woman is totally subject to her husband and to his will. She has no access to work but, on the contrary of Romanian women, they only work together with the husband or on behalf of the husband. So, there's another dimension of violence, which is domestic and economic violence. Because they're mostly dependent economically and totally, on their husbands, and this significantly affect their rights. And in addition, there is the increased isolation. We are talking about women who have been living in the area even for 10 years, and they speak absolutely no Italian. Because the only contacts they have, whether they are family contacts or contacts outside their family, work contacts, are all related to the Tunisian community. They have no way to move, mostly they don't have a driver license or a car to move from the isolated countryside where they live, and this creates a big problem of isolation. With them the problem is also that often the husbands don't want them to get out from the community, so we also had problems to make them come here (at the support desk). Because often husbands do not drive them here, so I have to go to their place. There is a sort of reluctancy on the husbands' side because they generally believe that it is not important or urgent, and also there's a general tendency to keep women inside the community to have a control on them. There's no recognition of the need to take care of health when there's not an emergency, or event to get out from the community and Tunisians networks. The big problem is that they live isolated in the greenhouses, particularly for women is dangerous to move by foot in the countryside, so usually I go to their place"
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> (Interview with social worker of the Caritas Praesidium in Marina di Acate. Marina di Acate, June 26, 2023)

From this first interview, three elements clearly emerge: the difficulty in accessing healthcare in general, and particularly reproductive health, where the dimension of control exerted by husbands is particularly strong; the transfer of control from the husband to the *husband-employer* or in some cases the husband-master; and finally, the broader dimension of segregation and subjugation that surfaced repeatedly, especially during interviews conducted with key informants. Although the interviewee's experience – having been active for years in providing support and assistance to migrant workers and their families – can be considered reasonably credible, the interview also reveals a rather simplistic portrayal of the context and dynamics in which migrant women seem to be trapped. While the aim of this study is not to establish an absolute truth regarding the dynamics at play, it is at least necessary to emphasize – as has been done in preceding

paragraphs and chapters – the complexity of these dynamics, particularly within such a marginalized context as that of the Transformed Littoral Strip. On this regard, the social worker's perspective, which tends to homogenize groups of workers and their internal dynamics based on their nationalities, seems rather misleading. While it is undeniable that discrimination and gender roles, as in any social order, shape and reproduce dynamics of segregation and isolation relying on physical violence, economic violence and body control, it is also essential to acknowledge that numerous forms of resistance and self-determination exist even within such highly marginalized situations. These elements make it impossible to generalize experiences and tendencies based solely on nationality. The story of Amina, as reported in the previous paragraph, alongside those of other women interviewed during this research, serves as concrete testimony to this complexity. For instance, according to another social operator, young migrant female students, unlike their male peers, cultivate a much stronger desire to break away from the predetermined paths imposed by their parents, often exclusively by their fathers. These paths are typically tied to an education that serves to further family projects, which almost always coincides with starting or sustaining agricultural businesses.

> "The role of parents is determinant for their decision, especially for girls, and often the activities we do together with them, there is a certain resentment on their part for what they experience at home. Especially on the side of young girls. In boys this happens less, because in any case even younger boys receive a share of power from their fathers, which mainly concerns the control of sisters, cousins, and this gratifies them in some way because they feel invested with a task. And the task is that of control, which makes them superior to their sisters, their female cousins, so that desire to rebel is inversely proportional. Whereas girls have no benefit from just obeying. They obey because they have no other choice in most cases, but if you offer them a different horizon maybe something happens…"

(Interview with the coordinator of the Caritas praesidium in Marina di Acate. Marina di Acate, June 6, 2023)

This perception of retaliation, predominantly associated with the school and educational context, was further corroborated during the observation of several afternoons spent supporting and engaging in activities with children and adolescents who were the children of migrant

farmworkers. In these instances, the majority of the young women emphasized the importance of pursuing education and interacting with their peers, as both a means of breaking free from their current circumstances and as potential pathway to transforming their future prospects. Within this context, a 16-year-old Tunisian woman, aged 16 reported to me that she had been talking about the living conditions in the area, and particularly the experiences of young migrant women living and working in the greenhouses, during an event at the University of Ragusa. The way she was talking about her experience was particularly significant as she told me she has been explaining "*how we live here, I talked about the fact that we, especially the girls, we really want to go to school, because for us that's the chance to imagine a different future and change our conditions".* As the coordinator of the activities in the Caritas Praesidium stressed, the dimension of control exerted by husbands and fathers is visible at every level and is delegated from male to male to maintain a prescribed social order that assigns specific roles to men and women. To this extent, it is particularly interesting how the social worker in charge of the women's support desk mentions how this form of control is exerted primarily over women bodies, and therefore through the sexual and reproductive dimension.

> "Concerning the issue of reproductive health and sexuality, one must necessarily consider the issue of violence, because basically there is no consent here, they do not know the concept of consensus here. We are mainly talking about women of Tunisian nationality who don't even know what consensus means, and they don't know that because most of the time they don't even know what dissent is. There is an obligation to fulfil matrimonial duties that entails total subjection to the husband. A subjection that also concerns the sexual sphere, whereby the husband's desire must always be satisfied, no matter what, regardless of whether his wife wants it or not, whether she feels pain or not. The problem is that then sexual intercourse is often followed by pregnancy and that is entirely the woman's responsibility, she is the one who has to take measures, to do something to avoid pregnancy in case. The point is that often, among Tunisians, the condom is not used with the wife, because by culture, at least that's what they say, the condom is only used outside of the marriage, but not with the wife. Other methods can be used, but it is always the woman who has to deal with it. The problem is that for instance, birth control pill, or the IUD (spirale anticoncezionale) have a monthly cost that the husband doesn't want to bear or to finance. In addition, access to these contraceptive methods, is often guided by a long series of examinations and check-ups. Then, in some cases, it has happened that since treatment for prevention and the taking of these kinds of

> instruments have been hindered, both by husbands and by economic possibilities, many women put themselves at risk by informally taking medicines imported by Tunisia, which have sometimes resulted in severe illnesses and even hospital recoveries. With Romanian women, it is slightly different because at least they have the possibility of carrying out voluntary terminations of pregnancies that in most cases are carried out clandestinely (…). But the main problem in most cases is the cost. Because the pill and the IUC have a cost…and also when you take the pill you then have to remember to take it every day. And we're talking about women who already have perhaps four or five children, so their daily life is often already very full, and they know that it's easy to forget to take a pill every day"

(Interview with social worker responsible of the women's support desk at the Caritas Praesidium in Marina di Acate. Marina di Acate, June 26, 2023)

According to the social worker interviewed migrant women's reproductive choices are closely intertwined with their migration experience, their living and working conditions and the migration policies that reinforce various constraints and obligations. These policies often leverage traditional familial roles and structures to impose gendered roles and forms of segregation as well as on the informal labour that is quite spread in the area. From this point of view, the norms and practices consolidated in the organization of agricultural labour in the province of Ragusa, have a major impact on the lives and wages of migrant women, especially when it comes to accessing welfare provisions such as maternity leave. In addition to the significant wage inequalities that severely penalize women's work, the practice of under-reporting working days, described in the previous chapters, which are often not recorded by employers, has a major impact on the level of maternity benefits, with the consequent compression of reproductive rights (Giammarinaro, Palumbo, 2022). However, while these conditions of marginality must be recognized, especially in order to build and promote policies and activities that are able to challenge and contrast them, it is also necessary to challenge a narrative of vulnerability that enacts especially on migrant women, picturing them as monolithic and homogeneous groups that is predominantly shaped by their male compatriots and by their nationality. Therefore, while isolation and marginality characterize the living condition of migrant workers exacerbating forms of gender discrimination and segregation, adopting a perspective based on social reproduction implies also to challenge and go beyond a simplistic narrative. While recognizing how subjective and individual experiences are influenced also by national belongings and migratory experiences, but also by the frequent economic

dependence on husbands and partners, this layering of intersecting dimensions must not embed migrant women in fixed position of vulnerability. Indeed, in some cases women "accept" exploitative and marginal conditions as this allows them to earn money, for instance when they work for their husbands. Others negotiate part of their individual freedom to be able to respond to their familial and children needs. In the case of Amina there's even a clear recognition and declaration of the willingness to invest on her individual education to ensure herself a better future and better living conditions. In some cases, the choice to escape exploitation and segregation occurs when better and concrete job opportunities are offered, or when dynamics of abuse are particularly dangerous. Several studies focusing on the gendered dimension of labor exploitation with the Transformed Littoral Strip (Palumbo, Sciurba, 2018; Massari et al., 2024), have documented instances of sexual exploitation, particularly affecting women of Romanian and Albanian origin. These findings were also corroborated during field interviews to social and medical worker operating in local social projects, and during informal conversations. Among migrant women living in the area, hierarchical and variable forms of discrimination indeed emerge. For instance, Romanian women, who benefit from relatively greater freedom that emerge particularly in comparison with Tunisian women – which is also granted by Romanians freedom of mobility as European citizens – are, on the other hand, more visibly exposed to other forms of exploitation (e.g., previous chapters have illustrated how Romanian workers often employ a strategy based on a downward competition) which in some cases also extends to forms of sexual exploitation[95].

> "The first day I went to the Praesidium I met A., one of the social workers that is responsible for the recreational activities with children and teens. "*Tunisian women* – she explains to me – *live under the complete control of their fathers, until they are given in marriage to a man, who is obviously chosen by the father*". A., tells me about an incident in which a Tunisian girl was accused

[95] As Palidda (2020) points out, it was an article by Alessandro Mangano in the Italian Express (15 September 2014) entitled 'Violated in the silence of the Ragusa camps. The new horror of the Romanian slaves', which first brought to light the numerous cases of sexual exploitation in the Ragusa countryside. There is good integration, but violence against women is a burden on everyone's conscience. It is a disgusting phenomenon, even if it is on the decline,' declared the then mayor of Vittoria, Giuseppe Nicosia. The article highlights how the forms of exploitation of Romanian women in the countryside are in fact the result of the convergence of two main tendencies: on the one hand, a retrograde and macho mentality that sees Romanian women as 'responsible' for their own exploitative conditions, since they work and live in isolated contexts without having men at their side to 'protect' them; on the other hand, it reflects one of the main elements that distinguishes Romanian women from Tunisian women, which has to do with the high presence of female workers who migrate alone.

> of being "*a whore*" because, during a relative's wedding, she danced hand-in-hand with a boy, and that boy was not the one she was "promised" to marry. "*And do you know how they were dancing*?" A., asks while opening her arms and doing some gestures, "*In a circle, holding hands in group*". "*It's a situation like Sicily 80 years ago*", she comments. During this first meeting and presentation there was also V., the responsible of the activities carried at the praesidium who also emphasized how another central element is that of male and gendered violence, particularly within Romanian families where alcohol dependency is also rather common. However, Romanian workers are also those who are more inclined to leave their husbands. "*Usually* – he says – *Romanian woman are those who better understand their situation; they have a much stronger will to reclaim their lives*". Many of them want to continue their studies. On the other hand, for Tunisian women, it's different, because the control il stronger. "*Often they really have little knowledge about basic aspects of every day lkde* – continues A., while talking about Tunisian women – *Maybe they are 20 years old and have never kissed a boy, they have never been to a grocery store*". She then talks about the importance of sex education "because often they don't know what a menstrual cycle is, they don't realize the importance of contraception. Control over them begins first and foremost with their bodies, through what they can and cannot do".
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> (Notes from the field diary. Marina di Acate, May 26, 2023)

As in the case of paid labor, the reproductive dimension of migrant labor also reveals a dynamic interplay between processes of negotiation and resistance on the one hand, and mechanisms of segregation and control on the other. These dynamics, however, are neither linear nor stable, but instead follow a variable geometry. From this perspective, the differences and continuities between Romanian and Tunisian women within the Transformed Littoral Strip is particularly illustrative. Romanian women often occupy a relatively privileged legal position, which allows them to leave their husbands or partners – especially in cases of domestic violence – without risking their residency status in Italy. This stands in stark contrast to the situation of Tunisian women, who, owing to their economic dependency or their arrival under family reunification programs, frequently find their legal right to remain in the country tied to their husbands. However, this seemingly advantageous position of Romanian women, is also accompanied by significant vulnerabilities. A more individualized migration model – where Romanian women frequently

migrate alone – and the greater propensity for married Romanian women to work in settings that are separate from that of their husbands (in contrast to their Tunisian counterparts) exposes them to heightened forms of control and violence. This includes the prevalence of sexual exploitation and harassment, which is compounded by the widespread abuse of alcohol among male agricultural workers. Such behaviors, however, are less pronounced within the predominantly Muslim Tunisian community, where alcohol consumption is largely absent. Conversely, Tunisian women appear to experience lower exposure to certain forms of violence but remain subject to extensive systems of control which they constantly challenge in their everyday life and through differentiated strategies. These forms of subjugation extend from the familial domain to the broader community and the workplace, where overlapping mechanisms of power create deeply entrenched structures of dominance.

Although social workers and other professionals often emphasize the vulnerability experienced by many migrant women in the region, as Palumbo (2022) observes, the concept of vulnerability has historically been fraught with ambiguity within the feminist discourse. This stems from its tendency to imply an intrinsic fragility in specific groups, which positions them as deserving protection. However, vulnerability should instead be understood as *situational* (Ibid), requiring an analysis of the broader structural and systemic factors that produce conditions of vulnerability within larger frameworks of oppression. From this perspective, it becomes possible to highlight the daily forms of resistance enacted by migrant workers and migrant women within and outside the workplace. As argued by Massari et al. (2024) and demonstrated through the interviews discusses in this section, these forms of resistance are not always overt or spectacular. Rather, they are often embedded in everyday acts of dissent: challenging the control imposed by husbands, fathers, brothers or employers; aspiring toward alternative professional futures beyond traditional constraints; carving out spaces of autonomy in daily life and acknowledging the importance of reproductive health and education. These dynamics, if recognized and supported by social workers and institutional interventions, can be further cultivated and amplified. Initiatives such as educational programs and women's support services play a critical role in strengthening these emancipatory efforts. However, such initiatives must contend with the significant socio-economic challenges of the Transformed Littoral Strip, a region where structural hardship often limits the space available to resistance and empowerment.

3. Environmental degradation and agricultural waste disposal in the Transformed Littoral Strip

The material and symbolic invisibilities characterizing the working conditions of farmworkers in the region of Ragusa primarily involve the segregation and isolation of workers, who are confined within the plastic walls of greenhouses. In these spaces, away from external observation, various forms of exploitation have been analyzed in the previous sections and in Chapter 6, placing severe strain on bodies subjected to grueling shifts and harsh environmental conditions. Furthermore, this isolation – combined with an almost total lack of services – diminishes and complicates access to essential welfare and services, including healthcare. From this perspective, it is quite challenging to identify significant differences between the effects of work in organic farms and those in conventional ones. As highlighted in various sections, this complexity is linked to the spatial continuity between organic and conventional farms, as well as the fact that contexts like the Transformed Littoral Strip operate under a fairly rigid set of rules and practices, leaving little room for exceptions. Additionally, it should also be emphasized that this study aims to analyze transformations and the role of labour within an industrial supply chain, intentionally excluding alternative and short supply chains from the analysis, which tends to be more closely regulated in terms of working conditions and also considering the products used for processing, as well as the final products themselves. Therefore, the relationship between productive and reproductive labor in the context of the Transformed Littoral Strip, must also consider its connection to another dimension: the environmental and ecological one. In a setting where agriculture is highly industrialized, reliant on plastic for greenhouses coverings and on an extensive use of agrochemicals, the environmental impact of such intensive production has a significant effect, not only on the local ecosystem, but also on the health of agricultural workers. Doctors interviewed during the field research described working and living conditions as the primary cause of the pathologies affecting laborers in this region[96]. These conditions typically

[96] The interviewed doctors were engaged both within the Caritas Presidio project in Marina di Acate, which also provides medical support to agricultural workers, and in the surrounding areas where a camper of the ONG Emergency is placed twice a week to offer medical and psychological assistance to agricultural laborers. In both cases, these initiatives were primarily promoted by third-sector entities and non-governmental organizations, which identified the need to address the lack of medical and healthcare facilities in the area, and the difficulties in accessing the limited existing services due to long distances and lack of transportation. These interventions aim to facilitate access to healthcare, particularly for irregular migrant workers, who are often less inclined to approach public institutions,

result in arthritic diseases, caused by constant physical strain, uncomfortable postures – often bent over – and particularly strenuous, uninterrupted shifts. These challenges are exacerbated during the summer months when temperatures inside the greenhouses become exceptionally high.

> 'At the health level, the main problems we encounter have to do with poor housing and working conditions, which in many cases lead to muscular problems, bronchitis and asthma. Most of the workers work inside the greenhouses without protective and safety equipment, in most cases they wear slippers rather than proper shoes. Irregular migrants in particular are the most vulnerable ones along with asylum seekers, because they cannot even claim to have the devices because they do not have a contract. They often work in shorts, without masks. They suffer from asthma, recurring bronchitis that are linked to poor working conditions. Perspiration, air blows. Younger children are often not vaccinated, they do not know they are entitled to vaccines. We have also noticed dermatitis, scabies...all things that have mainly to do with housing conditions".
>
> (Emergency association worker, Marina di Acate, July 20, 2023)

Although the concept of vulnerability has been partially criticized in the previous sections, aiming instead to highlight the structural dimension of marginalization, segregation and layered oppressions experienced by agricultural workers in the Ragusa area, it is nonetheless useful to revisit the notion of structural vulnerability as proposed by Seth Holmes (2011). This concept challenges the predominantly individualistic perspective of public health approaches and instead emphasizes the role of social structures in producing and organizing access to healthcare, thereby generating significant disparities and inequalities. To this extent Holmes, who conducted extensive ethnographic research on Mexican laborers employed in the strawberry fields of several agricultural companies in Washington State (U.S.) demonstrate how the production of invisible,

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including healthcare services, for fear of being identified as undocumented. The Caritas Presidio medical clinic project was initiated in 2014 and, during my fieldwork, expanded further through a collaboration with Save the Children, which financed the establishment of a facility exclusively dedicated to families with children. This facility also includes a small medical clinic. In contrast, the mobile clinic project launched by Emergency began in June 2019, following several surveys conducted in Acate, Vittoria, and Santa Croce Camerina. From its inception, the initiative has been providing nursing, medical, monitoring, and psychological services. The overarching goal of both projects, beyond offering medical assistance to individuals living in isolation with limited access to healthcare, is to bring agricultural workers closer to the Italian healthcare system without requiring them to rely on intermediaries, such as the so-called "*caporali*," for access to services.

hidden and segregated workers within the confines of farms, exposed them to significant barriers in accessing medical and healthcare services (2023). From this perspective, the concept of structural vulnerability as used by Holmes, is also instrumental in dismantling approaches that shift from a perspective based on blaming workers for their own responsibilities concerning individual healthcare and focus on the social structures that contribute to the creation of these inequalities. What Holmes (2014:178) defines as a *clinical approach* – as it is primarily adopted by doctors and medical stuff – implies that doctors visiting patients focus more on the disease and on the specific organs that are affected, rather than on listening to what the patient has to say to explain his condition. The author argues that this approach, which he founds as dominating among the medical actors – especially doctors and nurses – he has interviewed during his research, lead to an underestimation of broader human, social and environmental factors that also shape, making the conditions of vulnerability possible. Beside the role of doctors, and medical staff, this individualistic approach shaped around the dimension of responsibility, is particularly used by employers to blame the workers for their lack of interest and attention in using and adopting properly security and safety devices.

> "They don't want to use safety equipment even though we provide them with it. They prefer to work in slippers. We have also noticed that these people don't want to buy some things at all. They are used to it in their country. We bought safety shoes for them, but they don't want to wear them and prefer to wear sandals. They are not used to working with proper shoes we provide them. The problem is not that they are not paid enough, there is no school, no training on how work works in Italy. We have to teach them, but not all companies have this approach. There are also smaller companies where there is the owner who works with his wife and son, and then maybe he also takes the worker. So their culture is what it is…In the largest companies however there are safety courses and of course we also organize them... we have difficulties because many times, especially in the summer, they come like this, wearing beach shoes... it's not that they don't have money... they have money, because we give them money and we pay them... if one works here and is paid, then he cannot say he doesn't have money to buy shoes. Maybe he "drinks" all the money in beers...then the emigrant wants to save as much as possible and then send the money back to his family. Most of them live in very poor accommodations, they are renting dilapidated houses, but this has always been like this because the state does not

educate them, it does not explain to them how Italy works. They come and start working straight away'.

(Interview to farmer, Santa Croce di Camerina, June 13, 2023)

'They give us all the safety courses, but they depend a lot on the size of the company. They tell you, for example, that if you have to put plastic sheeting on top of greenhouses, they tell you how you have to harness yourself with ropes, that if you are faster, you get tired and risk more in terms of security. So, it's better if you do things well and slowly since you are at the top of a ladder. In the meantime, maybe they'll give you a talk about safety measures, saying that the company where you work on that still needs to be updated. But what happens in the end? That if something happens to you, it's your own problem. And even in the course they don't tell you about the negligence of the company, which makes you take the safety course anyway... and during the course they tell you that everything is your responsibility, because if they are doing a treatment in the greenhouse where you are working, or if they have just finished doing it, you have to wear a mask. And you have to be the one to safeguard yourself, which on the one hand is right, but in the end the responsibility is all yours. And how does it actually work, that if by law it is legal for you to work in a greenhouse where they did a treatment the day before, but you have to wear a mask to do it. And that's your responsibility and the owner doesn't provide it'.

(Interview with Italian farm labourer, Vittoria, June 30, 2023)

These two excerpts highlight, from different perspectives, the widespread tendency to assume that health risks and risky behaviors inherently carry the presupposition that an individual's suffering and health conditions are attributable to their personal choices (Holmes, 2011). Ultimately, these are seen as the result of factors that portray the worker not only as a victim of their own negligence and lack of responsibility but also of a "culture" that finds fertile ground in the agricultural exceptionalism described by Friedman (1993) and Skogstad (2002). This concept naturalizes the hardship of agricultural labor as intrinsic to the sector itself, thereby normalizing and legitimizing workplace accidents or illnesses resulting from exposure to toxic substances. From this perspective, the notion of structural vulnerability proposed by Holmes provides a framework to examine how heightened exposure to risks and diseases is tied to structural elements that decisively shape preexisting inequalities. These dynamics effectively reduce life, both within

and beyond the workplace, to a constant struggle for survival and contribute to considering medical and health aspects as separate from the political, social, historical and economic context (Holmes, 2014).

Following the hospitalization of an agricultural worker employed in the greenhouses of the company where participant observation was conducted, various discussions during lunch breaks prompted colleagues and migrant workers to share their thoughts on the incident. Almost all expressed a certain fatalism, acknowledging that the episode was almost inevitable given the physically demanding labor that the workers has been performing for more than thirty years. During one of these conversations, an Albanian woman employed in the packaging warehouse where I was conducting participant observation, shared with the other colleagues the story of her husband—who was also an agricultural worker—telling us how they were treated by the medical staff during their recovering period.

> "When my husband had a heart attack he went to the doctor. I immediately realized that they were all racists and after my husband recovered, I asked the doctor if he could go back to work. He raised his chair angrily and said, "*But madam, he MUST work*!" A bad person, really bad. Then afterwards my husband also had some kidney problems. So after a while I went to bring him to the emergency hospital because it was right after he had a heart attack. But the doctor didn't want to let him pass and wanted to charge him. The doctor of the hospital told him (to her husband) – "*I'll make you pay because you only came here for the headache, so if you want to stay you have to pay*"-, and so the next day we went back again to the hospital, but this time we had the doctor's prescription and so they let him through without paying". The discourse among the colleagues evolves and they talk more about how the first doctor was in fact alluding to the fact that her husband did not want to work, and that he wanted to use the hospitalization and the heart attack as an excuse to stop working. On the contrary, all the workers that were joining the conversation were all taking the distance from this narrative and instead emphasized their own ethics of sacrifice, continuing to discuss how they cannot imagine not working, or being "*smart"* by seeking alternatives to work "*like those who take unemployment and state benefits do*" they even go so far as to attack the citizenship income by also talking about all the "*young kids sitting on the couch playing PlayStation*!' '*For me these people can die if you don't want to work*".
>
> (Notes from fieldnote diary. Marina di Ragusa, October 18, 2023)

One of the effects of the process of externalizing responsibility, enacted both by employers and workers themselves, appears to be the general promotion of fragmentation and competition among workers. Discussions among those employed in the packaging warehouse, indicate that the tendency of employers and medical personnel to externalize and individualize responsibilities leads to an over-responsibilization of the workers. This over-responsibilitation manifests in workers presenting themselves as diligent laborers, differentiating themselves from those who seek strategies for doing nothing and not working. In this context, it is useful to draw upon Sanò (2018:60) reflections regarding the mindset of actors involved in the agricultural economy of the Transformed Coastal Strip. Sanò's analysis aims to elucidate the functioning of the local economic structure, which often entails dynamics of envy, competition, and distrust towards the state and of its institutions. This perspective reflects the creation and perpetuation of an institutionalization of economic informality, which, while not benefiting agricultural workers, empowers employers and local producers to dictate their own rules for the local agricultural market. Such a market remains deeply rooted in a strong attachment to autonomy and in a cultural substratum underpinning its economic structure (Avola et al., 2005). According to Sanò (2018), this dynamic enables workers, despite competing among themselves in a way that ultimately serves employers' interests, to assert their presence within the local labor market to counteract the informality of the sector and affirm their own legitimacy[97]. However, this inclination extends beyond immediate labor relations, encompassing workers' efforts to establish themselves as committed laborers even outside the production sphere. This dynamic remains in tension with the concept of migrant worker's mobility power (Alberti and Sacchetto, 2024), wherein workers determine when and under what circumstances they wish to embody the role of "good workers" (Thompson, 2013). This phenomenon has contributed to the initial consolidation of a stratification and substitution process within the Transformed Littoral Strip, where labor agricultural labour is stratified and based on

[97] On the other hand, Sanò (2018) - drawing in particular on Roy's (1952) ethnographic research aimed at studying and understanding the mechanisms of workers on production lines - highlights how agricultural workers also adopt strategies to reduce their workload and, consequently, their physical exertion. One of the most common strategies is to slow down, to perform tasks at a more leisurely pace. This is often done in the absence of the supervisor or when sudden physical discomfort occurs. In these instances, workers are able to reclaim time outside the pace and speed dictated by the production system, indirectly affecting the employer's profits. However, this strategy is primarily available to workers employed on a daily basis or under formal contracts. In contrast, piecework - where wages are directly proportional to the quantity of goods harvested - directly penalises the worker, making such tactics less feasible.

circumstances, national group mobility prospects, and available opportunities (Caruso, 2016; Corrado, 2017). Analyzing the relationship between agricultural workers' access to healthcare and the complex economic and social context of Ragusa's agricultural production sector reveals the structural dimension of oppression that gives rise to the concept of *structural vulnerability* (Holmes, 2011; 2013). This framework illuminates how responsibility, increased exposure to risk factors, and workers' susceptibility to diseases – often exacerbated by limited protections and restricted access to healthcare services – operates along a continuum. Within this continuum, workers' positions vary according to their productive relationships, legal status, gender, and housing and economic conditions. From this perspective, it is essential to consider the structural and determining role of legislation in establishing differentiated opportunities for healthcare access. Legislative frameworks significantly restrict access to prevention and treatment while exacerbating psychological stress among agricultural workers. Such an analytical approach enables an examination of how legal categories applied to migrant workers not only create differentiated classifications of low-cost, just-in-time labor but also contribute to compressing the costs associated with workers' social reproduction. This compression directly impacts workers' physical and mental health, perpetuating the normalization of fatigue and the inherent risks associated with agricultural labor.

Another central and structural aspect to be considered regarding agricultural production in the Transformed Littoral Strip area – therefore including also organic farming and agricultural practices - pertains to the environmental context and what can be described as the external physical conditions. These conditions encompass natural wealth, understood both as means of subsistence and as instruments of labor. From this perspective, several studies (Colloca, 2021; Lo Piccolo and Todaro, 2021) have examined the environmental impact of intensive agricultural production in the province of Ragusa. The environmental repercussions of this production, which has intensified over the last thirty years, have been devastating for the entire territory. As discussed in earlier sections of this research, the profile of excellence and quality that characterizes local agricultural products does not align in any way with the living and working conditions of agricultural laborers—most of whom are migrants employed within the so-called "plastic factories" (Piro, 2020; Sanò, 2018). According to Lo Piccolo and Todaro (2021), these territorial contexts, often fragile from an administrative and institutional perspective, exhibit phenomena of "suspension" of norms and rules under specific socio-economic conditions. This suspension also affects planning

instruments, which, in this context, significantly influence the organization and transformation of the landscape. Within the national agricultural sector, Sicily has traditionally played a leading role, particularly in the intense transformation of agricultural production, with the Transformed Coastal Strip serving as its epicenter. The area hosts approximately 9,000 agricultural enterprises managing over 9,000 hectares of utilized agricultural land, of which nearly two-thirds are dedicated to greenhouse horticulture (Infocamere, 2017). The rapid expansion of greenhouses, initiated in the 1950s, has radically altered the local landscape, converting previously unused areas—particularly those near the sea and the coast—into zones of greenhouse production. This transformation is especially evident pronounced along the stretch of coastline between Marina di Acate and Punta Secca, where, except for a portion designated as a nature reserve, the dune system has been entirely eradicated.

According to Lo Piccolo and Todaro (2021), this territorial reconfiguration implies a transition towards an "exceptional landscape", understood as the spatial outcome of the suspension of rights and rules. The authors argue that the economic power of the greenhouse production system exerts considerable pressure on political and administrative authorities, even in instances where such authorities should enforce control and regulations, which, however, remain suspended. Similarly, Colloca (2021) has described how the process of *plastification* in the Transformed Coastal Strip has significantly impacted not only the spatial and environmental reorganization but has also exacerbated the alienation and exceptional nature of agricultural work and its surrounding context. This process affects the territory, its inhabitants, and those employed in the fields, fostering intensive agriculture with drastic environmental consequences.

The environmental impacts of this intensive production model are particularly severe in areas dominated by greenhouses, where the extensive use of chemical products and pesticides for industrial-scale production is pervasive. One of the most widespread phenomena in this region is that of *fumarole*, which involves the frequent burning of plastic greenhouse covers and polluting agricultural waste at the end of the production cycles or growing seasons. As dusk falls, particularly during summer months when greenhouses are emptied and cleaned, the pollution and dioxin levels released by the fumarole make the air unbreathable. During numerous site visits and car journeys conducted during the research period, the smell of burning plastic was often intolerable, necessitating the closing of car windows and home ventilation to escape the suffocating smell.

“Here in Ragusa, you find two types of smells, in 99% of the case you find the smell of fumarole, the plastic that farmers burn because they do not know how to dispose of agricultural waste. In the meantime, the problem is sorting agricultural waste, because many do not do it and so the easiest solution is the lighter. More than the costs, in my opinion the point is the lack of goodwill, because the costs are not exaggerated, but there is no environmental awareness (…). Do you see that there is plastic on the roof of the greenhouses? That plastic is paid 10 cents per kilo to the plastic dealer (plasticaro), they are people who come with a van, take the plastic and take it away. I then pay 10 cents per kilo to dispose it. Consider that in my company they can also make 500 euro with all the plastic that I must dispose at the end of the season…maybe they make 3 or 4 trips, but it's 500 euro. The same goes for the plastic under the roof, which is a cavity that we put in to make a thermal cushion during the winter. These, however, are the valuable plastics, which are paid more. The plastics that rest on the ground, on the other hand, the off-white plastic that is used for mulching, that you put on the ground to prevent weeds from growing...this plastic, together with the little tubes from which the water comes out, need a separate treatment. Because they are soiled with sand and substances that are used for treatments, they also need to be washed. So, because it is a less valuable type of plastic, the plastic dealer cannot take more than 2 cents per kilo. But, I mean, if the plastic dealer is paid very little for a job and he can hardly pay the transport costs…in the end, you don’t even cover the transportation costs…so, in the end, you don’t even get that plastic there, you only get the high-quality one. And when you say to him, for example, “Look, I'll only give you that one for 10 cents if you also take the other one”, he replies that he doesn't have time and that he can't. So, I prefer to do it myself. I take all the plastics and I take them to the center where they dispose plastic, I don't pay anything, any intermediation, but in the meantime, I've made the trip, and I carried the plastic to the center. But I couldn't even do this, because my truck is not authorized to carry special waste. Because, after the plastic is used, it automatically becomes special waste and so I couldn't transport it, but rather than knowing that it is being burnt in the countryside I prefer to do this. Because when you burn plastic, as everyone here does, you release dioxins into the atmosphere, compounds that pollute the land, the soil, that fall on the environment, they pollute everything we produce, the soil where we produce and the water we drink and we use within the fields, and in the end, what happens? That everything gets depreciated. You depreciate the land; you depreciate the companies. If we become known as the new land of fires (terra dei fuochi), this farm goes from being worth 100 to being worth 20. Unfortunately, many farmers haven't understood this, if one doesn't go through

> the misfortune first, it is difficult. So, they continue to burn, perhaps not thinking about the consequences. But I repeat, there is a solution, you get the plastic dealer, and you make the proposal to him. "If you load the less valuable plastic, I'll give you the good one, and if they don't accept then you don't even give them the old one".
>
> (Interview with farmer, Scoglitti, 28 June, 2023)

> "Beside the landscape impact, much more important is the environmental impact on the territory. The environmental impact is indeed determined especially from the so-called agro-chemicals, and pesticides that are used to contrast parasites and pathogens that attack the plants. However, they are often used in an undiscriminated way by farmers who have little scruples. Therefore, an illegal market of agro-chemicals products has spread, importing products from extra-EU markets where these molecules are authorized. But these has terrible impacts on crops, on humans and on the environment"
>
> (Interview to the president of a local environmental organization. Scicli, June 12, 2023)

The *fumarole* thus involves the burning of various plastic materials, including containers, pesticides, plastic supports, plastic irrigation pipes, polystyrene seed trays, covering and mulching sheets, as well as clips and ties used for securing materials to plants. Along the main roads that traversing the Province of Ragusa, large mounds of this waste often lie in wait to be incinerated. Similar to the issue of illegal access to agricultural unemployment benefits, the buying and selling of residential permits for migrant workers, and the broader exploitation and residential segregation that confine migrant laborers, the phenomenon of *fumarole* is thereby perceived as a normalized collateral effect of local agricultural practices. Moreover, as noted by one interviewed farmer, adhering to legal waste disposal procedures —particularly for hazardous waste—would impose prohibitively high costs on companies[98]. One of the interviewees, a member of the *Terre Pulite* association and actively engaged in raising awareness about and denouncing the fumarole phenomenon, pointed out that in the province of Ragusa, waste disposal is predominantly controlled by the Stidda, the local mafia organization, which has increasingly infiltrated the

[98] According to several investigations conducted over the years on the issue of *fumarole*, the disposal of agricultural waste produced by greenhouse cultivation in the Ragusa area, has also significantly involved local mafia clans, generating millions of euros in profits for these organizations (Osservatorio sulla Legalità nel Terziario, 2021).

agricultural sector, particularly in the fruit and vegetable market and the disposal of agricultural waste. In recent years, approximately 7 kilometers of buried plastic have been discovered under under the beaches of Marina di Acate. This is 7 kilometers of black plastic, which is highly polluting and full of phytochemicals and microplastics that are poured into the sea and waterways. Considering sustainable agricultural practices, and how they are intertwined to the spread problem of pollution and environmental degradation linked to the *fumarole*, one of the members of the local organization *Terre Pulite*, stated during an interview:

> "In my opinion organic has absolutely no place in this context, because until producers are not aware of the fumarole and of environmental pollution of this area…how can they grow organic? Organic farming has indeed no place here, because of both the high costs and the fact that the area is already highly compromised from an environmental point of view. This makes it effectively impossible to think that organic is a real choice. There are organic producers who have sometimes found themselves with pesticides residues on their farms even though they do not use pesticides or chemicals. This is because there is a serious problem with the proximity of greenhouses to fumaroles!
>
> (Member of the association Terre Pulite, June 28, 2023)

Stever Lerner (2010) uses the term "sacrifice zones"[99] to describe low-income and racialized communities that bear a disproportionate share of environmental harms associated to pollution, contamination, toxic waste and heavy industry. In this context, disparities in wealth and power, often inscribed and reinforced through social processes of racialization, contribute to the unequal distribution of environmental burdens. According to data from ARPA in 2021, the levels of particulate matter (PM10 and PM2.5) - recognized by the international scientific community as the primary indicators of air quality due to the presence of pollutants that can cause chronic health effects - were among the highest in Sicily, measuring 15 microg/mc, placing the province fouth in the central-southern region after Avellino, Naples, Terni and Frosinone.

[99] Over time, some efforts have been made to find an effective description to refer to the link between residential and industrial areas that experience severe contamination problems. In legislative hearings they have been called *environmental high-impact areas.* However, environmental justices activists, who have been acti e in promoting awareness to improve conditions in these blighted areas, tend to call these areas "sacrifice zones", "fenceline communities" or "hot spot of pollution" to dramatize the fact that low-income minority populations, living next to heavy industry and military bases, are required to make disproportionate health and economic sacrifices that more affluent people can avoid (Lerner, 2010).

The previous sections outlined how rural areas near greenhouses and agricultural companies are predominantly inhabited by migrant farmworkers, who live close to the farms where they work. Despite a strong continuity between urban and rural areas in the Province of Ragusa, these locations are often linked to illegal waste disposal and fires, revealing a concept of differentiated rurality (Corrado, 2011) which has led to a stratification of migrant labor, across various dimensions, including roles, contractual agreements, official workdays and housing conditions. Therefore, it emerges how the low-income and racialized communities' shoulder much more than their fair share of environmental harms related to pollution, contamination, toxic waste produced by farmers and large agro-industrial companies operating in the area. On this account, disparities in wealth and power are inscribed and re-inscribed through a social process of racialization that reproduces inequality also on environmental burdens, finally affecting also health conditions (Scott and Smith, 2017)[100].

4. Living backwards: the burden of night work for workers employed in fruit and vegetable market warehouses

As stressed by the global value chain approaches (Gereffi et al., 2005) and global production networks frameworks (Barrientos et al., 2011), the integration of globally organized production processes connects not only firms and various local contexts, but also specific labor compositions characterized by heterogeneous forms of segmentation which shape different forms of social reproduction, leading to differentiated reproductive activities.

Consequently, the integration of local contexts and enterprises into a networked production matrix, transcends the mere issue of labor costs (Borghi et al., 2017). As Benvegnù (2018) suggests, the history and social relations of the places where workers live, grow and conduct their social life are intrinsically linked to the economic dimension of their workplace and work context. Indeed, these dimensions are mobilized and shaped as integral parts of both value extraction processes and systems of control and subordination, making them essential for understanding labor conditions and relations (Alberti et al., 2017; Coe et al., 2008). When examining how social

[100] It should also be considered that the housing isolation experienced especially by migrant farmworkers living in the coutryside around Ragusa also affects access to a number of services such as waste collection by private individuals. From this point of view, the countryside and the roads between the greenhouses, are often littered with rubbish, abandoned by the rural residents themselves, why do not have access to waste collection service in the area.

reproduction intersects with ecological aspects within the logistics sector – particularly in fruit and vegetable markets – it is crucial to emphasize the inherently spatial nature of logistics. Logistics involves not only material and informal infrastructures that connect and support territories, but also facilitates the global circulation of goods and information, thereby ensuring their social, economic, and material reproduction. The growth and the expansion of this sector have led to a significant proliferation of diverse infrastructures that enable the circulation of goods and information, illustrating how logistical infrastructures are distributed across territories and the underlying logics driving the flows of goods, information, and labor required for their reproduction.

To this extent, sectors such as logistics have experienced how offshoring of production and centralizing control over labour has impacted labour and social conditions, spatial and temporary continuity, and family dynamics as well as prospects of social mobility (Alzono and Hugrée, 2010). In the context of the warehouses in Padua and Bologna, one of the most significant factors influencing the work of all actors within fruit and vegetable markets, is the organization of working hours. Night-shift labor, regarded by all interviewees as particularly burdensome, poses a dual challenge: it is detrimental both to the physical health and work rhythms of individuals and to their ability to satisfactorily balance family life. This "inverse lifestyle" disrupts the temporal and spatial dimension of family and social reproduction, further complicating workers' daily lives.

> "I sleep during the day because we work at night. We start working at 11 pm so I need to get three or four hours of sleep during the day. Then we start to work, and we finish around 10 a.m. Then I usually get home, around 1 pm I eat, have lunch and then go to sleep. Always like that. We live backwards, we live and upside-down life. The hardest thing about this job are the night-hours, the work shifts…working at night I can't be with my children, I'm always tired and always want to sleep. I can't even help my wife, because I am always too tired. The only day I feel like a person is Saturday, when I am not working. There I can recover because after I sleep on Friday on Saturday morning I can recover, do something and be normal, otherwise, the whole week I usually feel like a useless person"

(Interview with porter employed in the warehouses of the fruit and vegetable market in Padua. Padua, April 28, 2023)

One of the primary consequences of night shift work, particularly in the context of logistics within Italian fruit and vegetable markets that have been analyzed within this research– where the workforce is almost entirely composed of male migrants from North Africa, Bangladesh and Pakistan – is the reinforcement of a gendered division of domestic and care work. This division often relegates household responsibilities entirely to women, especially when children are present, thereby reinforcing the male role as the primary breadwinner. The rhythms of night work, which entirely relies on male migrant workers representing the majority of those working as porters within the warehouses, demonstrates how temporal demands of warehouse labor extend beyond the workplace, reshaping the boundaries between workers' family reproduction and professional obligations (Shaw, 2022). Gregg (2018) highlights the interdependence between productivity practices at work and at home, pointing out that the history of time management has been primarily shaped by women's free care work within the domestic sphere prior industrialization. Similarly, Hanson and Pratt (2003) explore how night shifts necessitate intricate forms of temporal organization within households, with women disproportionately bearing the burden of aligning care and domestic work with family schedules. This contributes to perpetuate a dynamic in which women are responsible for reconciling the competing demands of work and domestic life. Therefore, female night shift workers often manage the household disruptions caused by their schedules, mitigating any negative effects on their partners and children. This contrasts with the experience of male night shift workers, whose domestic disruptions are often absorbed by their female partners (Schrecker and Bamba, 2015). As a result, as confirmed by Melbin (1987) who conceptualized night work as a new frontier of expansion of work into the dark hours, noted that women in households with male night workers frequently assume the additional responsibility of managing the logistical challenges caused by their partners' work schedules. Considering also the social impact of night-time shifts, therefore offers critical insights into the tensions that are embedded in social relations and allows to consider how reproductive practices emerge as pivotal elements in shaping the political and economic forms of worker organization and mobility, showing how the intersection of the productive and reproductive spheres becomes a key site for analyzing how capital organize and reinforce hierarchized human activities and their own reproduction (Alberti and Sacchetto, 2024; Del Re, 2008:112). From this perspective, welfare policies regarding the accessibility of public services for children, such as kindergartens and nurseries, play a significant role in alleviating the domestic and caregiving burdens places on

families and, traditionally, on women. While the work sphere largerly determines internal family roles – particularly in how it influences the organization of reproductive labor and the division of gender roles – institutions also play a crucial role in facilitating the overcoming of certain orders. Although welfare policies are not the central focus of this work, disparities in access to welfare and labor protections affecting migrant workers can significantly influence these dynamics. Control over reproductive and familial aspects – which is often inherent in migration policies, as seen with family reunification strategies – serves to restrict migrant families' access to certain welfare services. This, in turn, can impact the internal organization of these families, which is further influenced by the temporality and spatiality of labour.

Considering the impact of night-time work, several studies have also stressed how night rhythms might also affect health and social wellbeing of workers both acutely and more chronically, especially considering the effects of disrupted sleep and circadian rhythms on the body (Shaw, 2022). According to some of the actors interviewed during the fieldwork, nigh-time shifts condition significantly the composition of the workforce, favoring a significant increase in the composition of migrant workers within the markets.

> Over time, though, the number of Italians has decreased because the work has become increasingly demanding. Waking up at 2 a.m. and working through the night is exhausting. The pay isn't great, and it's a physically taxing and health-demanding job. Many stay for a while, but eventually, they quit or give up and leave. Finding replacements is difficult because it's hard to recruit employees. For example, when you say "*Okay, today you'll start at 10.00 pm and finish at 10.00 a.m. Does that work for you*?" 90% of Italians reply "*No, thanks*". This is because the shifts are grueling, the hours are long, and you have no social life. Typically, for these types of jobs, you end up hiring people who – I wouldn't say they are disadvantaged, but they certainly struggle to find any other type of work. It's becoming increasingly difficult to find individuals with a high level of training for this type of work".
>
> (Quality control inspector interview, CAAB, Bologna. March 14, 2023)

Night-time workers are disproportionately made up of migrant workforce and according to Brandellero et al. (2022) the share of migrants employed during nightshift has disproportionately increased after the Covid-19 pandemic. The increase in migrant workers employed in the warehouses of wholesale fruit and vegetable markets, many of whom lack access to private and

sufficiently safe means of transportation to reach their workplace, is another factor influencing the safety and accessibility of these markets during nighttime hours. In both cases, whether referring to the CAAB in Bologna or the MAAP in Padua, market facilities are located in peripheral areas of the cities, far from the city center and without an efficient or reliable public transportation system to ensure safe access. During one of the interviews conducted in Padua with a Pakistani warehouse worker, it became evident that the majority of migrant workers and porters employed in the MAAP as porters, go to work by bicycle or electric scooters. Similarly, interviews with workers at the CAAB revealed that often migrant workers often reach the warehouses with bicycles or electric scooters (*monopattino).*

> "I come to work by car, but most of the porters come by bicycle or scooter. Or if they can, they organize together with shared rides by car. The problem is that there are no more buses after a certain hour, or at any rate there are only a few and they often don't coincide with the times and the start of the shifts. Many prefer to come by bike, but it's not the best at night. Also because not everyone lives in the center, so sometimes they have to pass through dark streets where cars also go very fast. It's dangerous".
>
> (Intervista a un facchino impiegato al CAAB, Bologna, febbraio 14, 2023)

As in the Ragusa context, the absence and shortage of public transport connecting workplaces to migrants' homes is therefore a major problem for workers. A theme that emerges from the literature (Smith et al., 2007) is in fact that low income people, often migrants, having less access to private vehicles, are more dependent and vulnerable to local public transport problems and shortcomings, and public transport planning by municipalities or mandated bodies does not always take workers' needs into account, especially when it comes to connecting peripheral workplaces such as areas where fruit and vegetable markets or logistics hubs are traditionally located.

As highlighted in the previous chapter, the issue of nighttime working hours in wholesale fruit and vegetable markets emerged prominently during the interviews conducted in the field. Both warehouse workers and staff directly employed by the market in administrative or supervisory roles emphasized how this aspect significantly contributes to the arduous nature of work within the markets, leading to high turnover rates and difficulties in attracting younger workers who might be better suited to meet the demands of such exhausting labour processes and shifts. Beyond the physical labor of portering and logistics within the markets, some interviewees suggested that the

intense pace of work in fruit and vegetable markets also hinders generational renewal among warehouse operators.

> "Even from an entrepreneurial point of view, it is hard to find entrepreneurs and enterprising people who want to wake up at midnight. It's hard to find a 25- or 26-year-old who wants to do this kind of business. It is almost impossible. And in fact there are only four young people under 30 working inside the Bologna market. And they are traders. And then it is difficult especially for those who do the less skilled trades. For example, the staff who do the heaviest work, which rightly so must also be paid more... so certainly transferring the market to daytime hours would, on the one hand, lead to a reduction in costs and would also favour a greater qualification of the market, with more enterprising people who could approach this work and thus favour an increase in the volume of business, perhaps even satisfying those who do not come to the market, such as the large-scale distributors. But large retailers place orders from 11am onwards, and here at 11am everyone is already at home, so it's not possible to have orders accepted. So, I believe that a shift to daytime hours could be beneficial because it would also lead to more skilled workers".

(Interview to the responsible of marketing activities within the CAAB, Bologna January 14, 2024)

The approach adopted by market administrations regarding working hours primarily focuses on aspects that could significantly enhance the economic interests of the market, thereby increasing profits. However, these profits are heavily influenced by the overall functioning of the agri-food supply chain and the demands of buyers. Consequently, the challenges and strenuous nature of work for porters and logistics personnel are not central to the administrative management's considerations when addressing the limitations and issues related to market operating hours and schedules.

Conclusions

This chapter investigates the social and ecological dimensions of migrant agricultural workers' lives, focusing on the Ragusa province and the agri-fruit markets of Bologna and Padua. Employing the lens of social reproduction, this chapter examines the precarious nature of migrant

workers' lives, linking productive and reproductive spheres to explore the different manifestations of exploitation and resistance across different domains. This approach allowed for an analysis of the isolation and marginalization experienced by migrant workers due to spatial segregation and control mechanisms, including diverse housing situations and forms of labor intermediation, both formal and informal. The concept of the "camp labor regime" (Piro and Peruzzi, 2024), proved particularly useful in capturing the unique experiences of asylum seekers and refugees within this context, highlighting their differentiated strategies of resistance and agency compared to other migrant workers. The analysis also revealed how everyday practices of reproduction, while recurring to diverse forms of negotiations when acceding to public services, are also shaped by the system of production and by the social structures dominating at a both a local and relational level. From this perspective the chapter has also showed how forms of resistance are practiced on a private and domestic level in a continuum that is aimed at challenging the norms of national and familiar communities or of dominant social structures that are in turn also shaped by local contexts. Therefore, the chapter has also tried to show how, in particular by considering within the reproductive sphere, not only aspects related to domestic and care work, but also everything that is related to the access to public services, reproductive health and all aspects outside the workplace that are nevertheless influenced by labour processes, dimensions of rupture and emancipation are in many cases stronger and more visible on the part of migrant and working women, who are more likely to challenge orders, imaginaries and seemingly given life perspectives. The chapter further investigates also how conditions of social reproduction are also influenced by the environmental impact of industrialized agriculture, including the health consequences for workers residing in areas affected by *fumarole.*

Examining the interplay of gender, class, ethnicity, and migration status, reveals how seemingly disparate aspects of daily life – housing, transportation, healthcare access, and environmental conditions – are interconnected and mutually constitutive of exploitation. The precariousness of employment extends into all aspects of daily life, producing a system where marginality becomes structural and deeply embedded in the social and ecological fabric. Despite the structural barriers to mobility, the constrains imposed by migration policy requirements and employers and landlords, everyday practices of resistance, expressed through various forms and aimed at challenging the long-term consequences of complex dynamics and orders are practiced everyday by migrant workers. In the province of Ragusa, the spatial organization of production and reproduction, the

proximity of housing to workplaces, facilitates employers' control over workers' lives and reinforces precariousness. The lack of adequate housing, transportation, and healthcare, coupled with environmental hazards and the burden of informal labor, highlights the inadequacy of existing policies and support systems in adequately addressing the needs of this vulnerable population. The findings emphasize the necessity for a re-conceptualization of social reproduction that moves beyond a narrow focus on domestic labor and care, encompassing the broader ecological, economic, and social conditions shaping daily life, considering also how social reproduction is also shaped by a structural vulnerability (Holmes, 2011, 2014) that particularly affects health, but also the environment. To this extent, the section stresses the importance of the dimension of environmental degradation as one of the aspects that conditions more the context where the activities of social reproduction are pursued, stressing how poor living conditions and negative environmental effects, particularly affect the most marginalized ones.

Analyzing the two different contexts of farm working within the Ragusa province and porters employed in markets, allows to capture the continuities between the two contexts. In both contexts, indeed, living conditions, family structures, domestic relations, and their interplay with ecological and environmental factors are profoundly shaped by the industrial organization of production and labor. Comparing the two levels of the supply chain analyzed—production and logistics—reveals that while the conditions of work and life affecting labor production and reproduction are significantly influenced by the logic and functioning of the supply chain and its associated production processes, the two contexts present both significant differences and continuities. The continuities primarily concern the composition of the workforce, largely migrant, which has grown significantly due to increasing industrialization of production and a resulting reliance on a flexible, low-cost, and easily replaceable workforce. However, the forms of control, intermediation, negotiation possibilities, and the manifestations of marginalization and social exclusion are determined primarily by the organization of labor processes, resulting in diverse effects. For agricultural day laborers in the Ragusa province, social marginalization is particularly influenced by precariousness and poverty, leading to housing instability and dependence on various forms of intermediation, forcing constant negotiation for basic needs such as transport, healthcare, and mobility. In contrast, within the agri-food warehouses, night shifts are the primary factor influencing labor reproduction, reinforcing the gendered division of domestic labor and negatively affecting the health of warehouse workers. This industrial organization has redefined divisions and

fragmentations extending far beyond the workplace itself. The study concludes that this is a continuum characterized by precariousness, indeterminacy, and shifting dynamics where, however, forms of resistance take place and challenge the social order proposing new strategies and trajectories of assertion and self-determination. These forms also challenge migration infrastructures (Xiang and Lindquist, 2014) where forms of control, exclusion and intermediation are also constantly reproduced.

Final conclusions

The present study focused on the analysis of the agri-food supply chain, with a particular emphasis on the elements of continuity and discontinuity that characterize industrial organic agriculture in comparison to conventional farming. Rather than taking a comparative analysis, the study adopted a supply chain approach, employing a dual approach that aimed to examine transformations at the meso and micro levels. This approach has been adopted to engage with the numerous contributions that in recent years have examined the transformations of agrifood supply chains and to empirically assess the extant literature on the subject. The study's findings demonstrate the continuities and similarities between the two production models, revealing the effects of supply chain restructuring within the context of the Corporate Environmental Food Regime on workers – especially migrant workers – at different segments of the supply chain.

The mounting interest in environmental issues has prompted significant shifts in European industrial policies, including in the agri-food sector, underscoring a growing emphasis on the promotion of environmentally sustainable agricultural policies. As highlighted in the initial chapters, within the agri-food context this drive has coincided with a progressive "conventionalization" (Buck et al., 1997; Guntham, 2004) of initially more sustainable production models, such as organic farming. This phenomenon has been noted as early as the 1990s by prominent scholars in the field, including Friedmann (1993) and Buck et al. (1997), who have observed the substantial market presence of large agribusinesses in the organic sector.

Since the last decades, the philosophy and principles of organic farming, which were initially linked to claims originating from social movements that sought to denounce industrialization and intensification of agricultural production with the Green Revolution, have been progressively integrated within an industrial logic. Large corporations and agribusinesses have decided to invest in this field, perceiving the growing awareness of environmental issues as a potential source of profit. Prominent retail chains have established their own sustainable and ecological brands, embarking on experimentation with natural and healthy product lines that meet the demands and inclinations of affluent and "conscious" consumers (Friedmann, 2005). Consequently, organic production has witnessed robust growth, propelled by escalating consumer demand. This process is further substantiated by the corporate history and extensive experience of a leading Italian company such as EcorNaturaSì.

Main implications and findings of adopting the labour regime framework

The theoretical approach employed within this research has favored a comprehensive understanding of the intersections between the diverse dimensions of the labour regime conceptualized by Baglioni et al. (2022) (i.e., production, circulation, social reproduction and ecology. The decisions to conduct an analysis that engages into two main levels – that of the relationships among various actors of the agri-food supply chain, and that of the workers employed along the chain – has allowed for a constant integration among two main dimensions among those identified by Baglioni et al. (Ibid): that of circulation, pertaining to the organization and structure of the supply chain, and that of production, which relates to the organization of factors and production processes along different spaces and times. Moreover, the ethnographic approach adopted along the thesis has also facilitated the examination of the continuities between work processes and the reproduction of the labour force, with a particular emphasis on the role played by social differentiations, especially in terms of gender and race. Finally, the specific focus on the organic supply chain and the analysis of its progressive interaction with industrial (concerning the logistics) and contextual (concerning the production) dynamics, has allowed for the consideration of the ecological element's role in the restructuring agri-food supply chain processes.

The structure of the chapters analyzing the material collected during the fieldwork periods (in particular Chapter 5,6 and 7) aimed to elucidate the ways in which the different dimensions interact with each other.

Chapter 5, which focuses on a meso-level analysis of the supply chain, reveals the main links between the organization of circulation, and the overall organization of production. The chapter examines the role of actors operating within the supply chain (*Who controls production and how?*), the direction of power and control dynamics across the different segments of the supply chain (*What is the main form of division of labour among employers?*), and how the organization of the supply chain affects relationships and labour processes, particularly for those working within logistics hubs and wholesale produce markets. The chapter also explores the significant power asymmetries that characterize the supply chain, wherein substantial distributors wield considerable influence on pricing and contract terms, negatively affecting smaller producers. As a result, smaller producers are often forced to negotiate unfavorable conditions imposed by brokers and retailers, thereby exacerbating existing inequalities. Within the organic sector, the presence of third-party certification bodies serves to reinforce the dominance of larger producers, thereby strengthening

power imbalances. Despite the existence of EU initiatives aimed at addressing the issue of power asymmetries between large and small producers, the proliferation of certification bodies has primarily benefited agribusiness giants, contributing to the creation of additional market barriers for smaller actors. The chapter finally examines also the impact of green transition policies, focusing on the Italian PNRR, which aim to enhance sustainability while overlooking economic inequalities and working conditions within the supply chain. To this extent, the existing contradictions and gaps between socially and environmentally sustainable practices were also highlighted by the frequent recurrence of subcontracting practices and externalized labour, especially at the logistical level.

Chapter 6 discusses how workers are employed across different segments of the supply chains, focusing on the power dynamics and asymmetries at play, on the tasks and roles associated to each stage, and on the ways in which forms of control, authority, and mobility are exerted both by workers and managers. The chapter mentions some of the main challenges encountered during the fieldwork conducted in the Transformed Littoral Strip, especially concerning the difficulties faced in disentangling the dynamics and logics affecting working conditions and labour processes, from those characterizing the local context. On the other hand, the analysis reveals that the dynamics characterizing the agricultural sector cannot be viewed as isolated, but are instead intertwined with the governance of migration, with the role played by third sector and local organizations, and with the relationships between the local agricultural economy and the significative presence of migrant workers. On this regard, the chapter also stresses the important role played by intermediaries – both formal and informal – in contributing to the fragmentation and stratification of labour relations. The chapter also highlights how the restructuring of the agri-food sector is linked to broader systemic changes, particularly concerning sustainability initiatives such the increasing role of organic certifications. However, the increasing role of organic certifications and supermarket standards, tend to prioritize processing and production guidelines over farmworkers' labour conditions. Particularly, it emerged how organic practices, by focusing on increasing preventive practices and more time-consuming tasks, can inadvertently increase workers' workloads and exacerbate inequalities along the chain, by maintaining existing power dynamics. Despite precariousness and indeterminacy permeates everyday aspects of productive and reproductive activities, migrant workers, face significant structural barriers, engaging in acts of resistance against these complexities

Chapter 7 explores how labour processes and working conditions shape the lives of migrant workers employed within the fields and packaging and packaging warehouses of the Transformed Littoral Strip, and within the fruit and vegetable markets of Bologna (CAAB) and Padua (MAAP). Drawing on the labour regime framework, it examines the precarious lives of migrant workers, linking their productive and reproductive spheres to analyze the various forms of exploitation and resistance in place. The initial part of the chapter reveals how migrant farmworkers employed in the Ragusa Province face isolation and marginalization due to the spatial segregation. It emphasizes how everyday reproductive activities involve a constant negotiation for acceding public services such as school, healthcare and transports. Moreover, the chapter focuses on the forms of resistance – frequently enacted at both the private and public level – aimed at challenging established norms established within national and familial communities and within workplaces. The findings collected in this chapter, indicate that while both contexts – that of production and that of logistics - present significant differences and continuities, the industrial organization of labour leads to similar precarious conditions, housing instability, and dependence on various forms of intermediation. Nevertheless, despite the pervasive precariousness and indeterminacy, forms of resistance persist, challenging the social order and proposing new strategies for self-determination that also challenge and confront with migration infrastructures where mechanisms of control and exclusion are continuously reproduced.

The restructuring of relations along the supply chain

Based on a close examination of transformations of the Corporate Environmental Food Regime (Friedmann, 2005), as discussed in Chapter 1, the empirical investigation of case studies has enabled the identification of the main processes that characterize the restructuring of the agri-food supply chain according to organic standards. Specifically, the meso-level analysis and the focus on the case of EcorNaturaSì and its supply chain have revealed three key elements of this restructuring:

1. The consolidation of power asymmetries at the production level, accompanied by the emergence of certifications in intermediary processes.
2. The strengthening of the position of large distributors along the supply, as well as progressive marginalization of fruit and vegetable markets. This phenomenon results in the

supply chain becoming increasingly controlled by large companies at the expense of smaller ones.

3. An increasing integration of labor and work processes into an industrial-type supply chain both in production and packaging operations and in logistics.

With regard to the first point, it has come to light that industrial agriculture production, characterized by the integration of farms within verticalized supply chains, has effectively permeated the realm of organic farming. The entry of new actors, mostly certification bodies that function as "private regulators," has served to reinforce this process by primarily benefiting large companies that already dominate the agro-industrial sector. As discussed in Chapter 5, the close ties between large producers and certification bodies – frequently affiliated with the same supermarket chains that create certification standards and independent brands – result in their complicity in defining guidelines for organic certification. Consequently, the largest and most influential producers in the market determine the rules and standards to be followed by producers wishing to enter the market. According to de Castro Pericacho et al. (2021), the increasing standardization of production processes is a primary driver of the bureaucratization of production through the creation of institutions and actors – in this case, certification bodies and boards – tasked with coordinating and controlling the activities of economic actors. This process, as part of what Loconto and Busch (2010) termed the Tripartite Standard Regime, has resulted in the reorganization of the supply chain, wherein intermediation has become the space for the assertion of new actors and power strategies by large companies. From this perspective, the advent of certification bodies and the emergence of new actors charged with ensuring compliance with organic requirements represent an opportunity for influential companies to define rules and standards to enter the market. This phenomenon has been further facilitated by the growing consumers' demand for quality and certified products that ensure safety and health standards (Fonte and Cucco, 2015; Campbell, 2009). The increasing predominance of large-scale production enterprises has resulted in a marked widening of the gap between large and small businesses, thereby reinforcing preexisting power asymmetries and propelling the emergence of extensive distribution chains.

Secondly, the findings of this research demonstrate how this transformation has resulted in substantial changes in the balance between different actors in the supply chain, with fundamental

consequences, particularly for the role of fruit and vegetable markets. Verticalization processes have led the largest distribution chains to move intermediation practices into distribution platforms, internalizing key segments of the supply chain, such as logistics operations. The rise of large, independent platforms under direct control of prominent retailers has coincided with a marked decline in the role of wholesale fruit and vegetable markets, which were previously pivotal to exchange and intermediary processes within the supply chain. A salient example of this phenomenon is the history of CAAB in Bologna, which was conceived during a period of substantial growth in the agri-food sector but was actually established when production platforms had already begun to emerge. The thesis of conventionalization of organic farming and of the verticalization of the supply chain in favour of large retailers is further substantiated by the observation that these transformations affected the segments of the supply chain specialized in organic production, such as EcorNaturaSì, which in 2021 centralized its logistics operations by opening a large distribution platform at the Bologna interport.

The third and final element central to this investigation examines labor and work processes within the supply chain. This area proved to be the most complex and challenging for assessing the direction and extent of the impacts of the aforementioned transformations. Several factors contribute to this difficulty. On the one hand, analyzing various segments of the supply chain facilitated a broad and comprehensive understanding of the prevailing logics and dynamics. On the other hand, this breadth often came at the expense of capturing the specificities of individual contexts, particularly in relation to labor conditions. The research conducted in the Transformed Coastal Zone further underscored these challenges, as the complexity of the territory made it difficult to disentangle local contextual dynamics from structural elements inherent to the supply chain's logic. The results presented in Chapter 6 reveal several contradictions that emerged during the fieldwork research in the Ragusa Province. These include the spatial continuity between organic and conventional companies; the difficulty in identifying workers who recognized differences in work processes between organic and conventional agriculture; and the profound influence of entrenched socio-economic dynamics rooted in the territory, primarily concerning the strong social and housing marginalization of migrant workers employed in the local agricultural context. The fieldwork conducted at the logistical level in the markets of Bologna (CAAB) and Padua (MAAP) also revealed several contradictions. The projects for promoting green and digital innovation of the sites overcome the social challenges faced by workers – especially concerning

externalized porters – employed within the operator's warehouses. To this extent, interviews conducted within the logistical sites of the whole sale agri-food markets of Bologna and Padua, but also within the logistical hub of EcorNaturaSì, revealed quite clearly the urgent need to bridge the gap between social and environmental dimension of sustainability.

Continuities between supply chain dynamics and labour organization

The findings delineated in the previous sections, unveil a geography of variable geometries, wherein, depending on the adopted perspective, it has been possible to bring out continuities, discontinuities and contradictions that occasionally intersect with trends detected at the meso level of analysis. From this perspective, various continuities have been identified between these two levels, particularly in consideration of two primary aspects that influence the organization of the supply chain and of labour processes: the role of fragmentation and intermediation. These elements exhibit a dynamic relationship across both levels.

Considering fragmentation, it has been observed how this phenomenon operates within the meso-level of the supply chain, creating a continuous tension between processes of disentanglement of production segments and processes, and the rearrangement efforts by large retailers. On this regard, they continuously seek to centralize control by internalizing certain segments of the supply chain, such as logistics, or by establishing production norms and standards, exemplified by the introduction of organic certification. This dynamic reflects the complexities of managing both fragmentation and consolidation within the agri-food sector. However, fragmentation also exerts influence at a more micro level, primarily by impacting workforce composition through outsourcing practices (e.g. subcontracting and the employment of service cooperatives), but also by leveraging the role of migration policies in fostering a stratification of the workforce that determines its differential inclusion in the labour market (Mezzadra and Nielsen, 2014).

Concerning intermediation, Valeria Piro (2022) has stressed the pervasiveness of this dimension within the food supply chain, emphasizing its infrastructural character. The present study underscores the centrality of intermediation across the two levels of the analysis. At the meso-level, intermediation is a central element within the agri-food chain, undergoing constant changes due to the numerous restructurings that the sector has undergone in recent decades (see Chapter 1). A salient transformation in this regard has been the progressive shift in the spaces devoted to

intermediation, which has transitioned from fruit and vegetable markets to the logistical platforms of large-scale distribution. This transition has resulted in a centralization of control and power in the large distribution chains, accompanied by an escalating role for certification bodies in defining market rules and standards. Conversely, in a supply chain increasingly oriented towards just-in-time production, intermediation assumed a central role in the organization and recruitment of labour. Within more regularized and formal logics, intermediation emerges in the role of cooperatives providing externalized portering services in warehouses within fruit and vegetable markets or logistics platforms. Similarly, in the context of agricultural production analyzed, forms of intermediation find a place particularly in the lack of services and the social marginalization of migrant workers.

Identifying the interweaving points among production, circulation, social reproduction and ecology

A significant contribution of this work is the effort to delineate and identify some of the main interweaving points among the four different spheres identified by Baglioni et al. (2022) and considered as central along the analysis of the Italian industrial organic agri-food supply chain. The framework of labour regime (ibid) has been examined for its interaction with the corporate environmental food regime (Friedmann, 2005), leading to the identification of the main points of intersections between the four spheres. This analysis has also enabled the delineation of the directions of some of the transformations and the point of continuity and discontinuities existing between organic and conventional agriculture within the industrial agri-food supply chain. In this regard, the case study on the Italian context, and the ethnographic approach adopted, have revealed the transformations and continuities of economic and social relationships within the green transition of the agri-food sector.

Consistent with the previous research (Corrado 2018; Buck et al., 1997), it has emerged how organic agriculture at the industrial level is part of a broader transformation characteristic of the corporate environmental food regime (Friedmann, 2005), in which environmentally sustainable agricultural practices are integrated and transformed in the ways that appear most useful to capital. Therefore, the dynamics and relationships within the organic supply chain share many continuities with conventional agricultural supply chain. The intersection of practices and channels of circulation, distribution, intermediation and certification plays a crucial role in reinforcing

dynamics and hierarchies of power. It emerges how national and supranational policies encounter challenges in adopting a systemic approach which is further compounded by the fragmentation of supply chain and labor processes. This hinders the ability to effectively measure correlations between improvements in environmental sustainability and improvements in social sustainability, particularly concerning working conditions. In this regard, labour provides a critical and fundamental perspective for analyzing the impact of the green transition in agriculture. Moreover, an empirical and qualitative approach has enabled a deeper exploration of some of the limitations and contradictions present in the existing literature. In this context, Migrant labour is of particular significance, given its prevalence in the agri-business sector, as well as its capacity to accentuate the contradictions inherent in the green transition and the corporate environmental food regime. The dual speed of these processes, as evidenced by this analysis, has differential effects that intersect with other dimensions, including labour regime and migration regimes.

Strategies of resistance and perspectives for future research.

A final element that has emerged as central, especially in the context of labour processes and labour organization analysis, is that of resistance strategies adopted by various actors throughout the chain to affirm their own interests and enhance their position. In this regard, numerous studies analyzed the role of alternative peasants' networks in defining and advocating mutual strategies of resistance, frequently promoting short-supply chains with an increased focus on social dimensions of food production (Perrotta, 2017). In addition to these strategies, which are mostly characteristics of alternative networks that are often outside industrialized supply chains, forms of organizations among producers also along produced involved within industrial agri-food chains. Resistance strategies have been adopted among small producer through forms of horizontal integration, and strategies implemented to avoid and bypass levels of intermediations and therefore reduce costs in order to access increasing competitive markets.

Nonetheless, the most significant strategies of resistance emerged among migrant workers, particularly in their attempt to challenge the racialized norms regulating both the productive and reproductive sphere. The findings demonstrate that workers employ a variety of resistance and agency strategies, encompassing both individual and collective actions. These strategies manifest in both organized and unorganized forms, always attempting to overturn social orders imposed by

regulatory and policy instruments, labour control, and familial roles. The conceptualization of labour mobility power and turnover as a primary form of resistance, as proposed by Alberti and

Sacchetto (2024), underscores the collective nature of migrant workers' decisions and their struggle over mobility. In this regard, the stratification of migrant workforce in the context of the Transformed Littoral Strip, has allowed to capture the nexus between the differential inclusion of workers established by migration policies and the various strategies employed by migrant workers to overturn limits into strategies of mobility. While migrants' mobility patterns might appear to be individual, Alberti and Sacchetto (Ibid) underscore their interconnection with migration infrastructures and the collective endeavor to enhance working and living conditions. Moreover, the analysis of how strategies of mobility employed by specific national groups affect the material conditions of others is crucial. For instance, the substantial arrival of Romanian workers in the agricultural sector of Ragusa has had a detrimental effect on the wages and working conditions of Tunisian workers, who were already settled within the local labour market. The migration strategies of resistance, therefore, are not static or linear, but are shaped by local and contextual factors, including labor opportunities and the existing migration infrastructure.

Despite the centrality of resistance practices within the analyzed context, one of the most visible limits of this work has been the little capacity to capture the nexus between workers organization strategies and resistance practices on the terrain of the green transitions. The green transition and the promotion of environmentally sustainable practices presents a complex terrain for labour dyamics, where sustainability initiatives often intersect with issues of exploitation, marginalization and discrimination. Consequently, the need to analyze and deepen the knowledge of workers' collective and individual practices of resistance is particularly urgent within the academic debate. While workers may engage in unionized struggles against exploitative conditions, these actions do not always translate into coherent organizing strategies. This raises questions about the challenges and difficulties of addressing the consequences of the green transition from the perspective of workers. Furthermore, a comprehensive understanding of the interconnections between these domains, by examining how they are linked across different segments of the supply chains, may enable the development of deeper comprehensive frameworks for analyzing workers-led initiatives within the agri-food supply chain and analyze how workers' goals may align with sustainability goals.

Appendix I. List of conducted interviews

	Name/role	Profession/affiliation	Date and location of the interview
1	Giulio Iocco	Researcher and member of the Terra association	Online 14/12/2022
2	Carlo Basile	Researcher and member of Rete Hummus association	Online 17/04/2022
3	Alberto Zottino	Responsible of fruit and vegetable sector for EcorNaturaSì	Online 06/03/2023
4	Carlo Murer	Responsible of Corporate Social Responsibility for EcorNaturaSì	Online 06/03/2023
5	Lucio Cavazzoni	President Goodland S.r.l	Bologna 07/03/2023
6	Franco Zecchinato	Organic operator within MAAP	MAAP 11/10/2022
7	Matteo	Environmental quality control and safery officer at CAAB	CAAB 16/03/2023
8	Lorenzo	Responsible of loading/unloading canopy	CAAB 21/03/2023
9	Carla Zanarini	Organic operator within CAAB	Bologna 27/03/2023
10	Kalid	Porter at CAAB	Bologna 16/03/2023
11	Mohamed	Porter at CAAB	Bologna 16/03/2023
12	Luca Dall'Ognol	Adl Cobas Padova	Padova 13/12/2023
13	Mosul	Porter at MAAP	Padova 11/12/2023
14	Duccio Caccioni	Marketing Director at CAAB	CAAB 11/01/2024
15	Chiara Faenza	Responsible of Corporate Social Responsibility for Coop Italia	Online 12/12/2023
16	Basil	Farmworker from Ghana	Acate 01/06/2023
17	Ibrahim	Farmworker from Senegal	Acate 01/06/2023
18	Giorgio Battaglia	Organic farmer	Comiso 24/05/2023
19	Stefano Carruba	Organic farmer	Marina di Ragusa 25/05/2023
20	Domenico Cappello	Organic and Conventional Farmer	Niscemi 01/06/2023
21	Vincenzo La Monica	Coordinator of the activities at the Caritas Praesidium	Marina di Acate 08/06/2023
22	Claudio Parrini	Manager of processing warehouse	Comiso 13/06/2023
23	Vera	Warehouse processing worker	Comiso 14/06/2023
24	Giorgio Abate	CGIL Ragusa	Vittoria 14/06/2023
25	Omar	Moroccan farmworker	Marina di Acate 15/06/2023

26	Dario Biazzo	Lawyer operating at the Caritas Praesidium	Vittoria, 23/06/2023
27	Massimo Ferrera	Organic farmer	Marina di Ragusa 27/06/2023
28	Lucia	Social Operator at the Caritas Praesidium	Marina di Acate 27/06/2023
29	Mariam	Romanian farmworker	Scoglitti, 28/06/2023
30	Elio	Italian farmworker	Scoglitti, 28/06/2023
31	Antonio Cassarino	Conventional Farmer	Scoglitti, 28/06/2023
32	Riccardo Zingaro	Activist of Terre Pulite	Vittoria 28/06/2023
33	Michele Mililli	USB Ragusa	Ragusa 28/06/2023
34	Fauzì	Tunisian farmworker	Marina di Acate 04/07/2023
35	Giuseppe Rizzuto	Organic farmer	Marina di Acate 29/06/2023
36	Adriana	Romanian farmworker	Vittoria 30/06/2023
37	Christian	Italian farmworker	Vittoria 30/06/2023
38	Siria	Italian farmworker	Marina di Acate 04/07/2023
39	Coly	Senegal farmworker	Vittoria 05/07/2023
40	Khaled	Tunisian farmworker	Vittoria 06/07/2023
41	Amina	Tunisian farmworker	Vittoria 06/07/2023
42	Gianfranco Cunsolo	Organic farmer	Marina di Acate 19/07/2023
43	Ahmed Echi	Emergency operator	Marina di Acate 20/07/2023
44	Bruno Giordano	Former President of National Labour Inspectorate	Ragusa 21/07/2023
45	Chiara Pitti	Operator at Casa Valdese di Vittoria	Vittoria 25/07/2023
46	Marta	Operator at Casa Valdese di Vittoria	Vittoria 15/05/2023
47	Angelo Libretti	Organic and conventional farmer	Vittoria 25/10/2023
48	Ronnie Sartor	Responsible of the logistic site of EcorNaturaSì at the Bologna Interport	Bologna 27/04/2023

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